The Yale Entrepreneur

FALL 2006

Magazine of Business and Innovation

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CONTENTS fall06

DEPARTMENTS

FEATURES


23


40

44

from the Editor

Government, Inc.

AFTER SUCESSFULLY releasing our premier issue last spring, we are pleased to continue the publication of the *Yale Entrepreneur* this fall. With "The Ethics of Innovation" as our first theme, we hoped to continue in the vein of an entrepreneurial debate branching across various disciplines and practices. To that end, we have chosen as our feature one of the most pressing issues of our time: privatization. Whether it be in popular areas such as health care and education or less conspicuous issues such as water and private military contractors, the debate over whether basic services are most effectively provided by the government or the private sector is raging across all cultures and polities.

Since the 1980s, a curious trend has arisen towards privatization after decades of FDR-induced big government programs. Whether this is largely a result of a broad loss of faith in the competency of the government or a realization that there are untapped opportunities for profit, privatization has not been without its share of resistance. Impassioned political debate, protests, and even violence are sure to ensue when privatization appears. It is for this reason—the inherent controversy surrounding the transformation of the most crucial aspects of a society—that we chose privatization to be at the forefront of this issue.

YE was also fortunate to have traveled to Omaha, Nebraska to hear from Warren Buffett about his thoughts on the privatization. Buffett, largely agreed to be the greatest investor of our time, set forth a unique perspective on this vital issue. Well-known for his down-to-earth persona and his general distaste towards profligacy, Buffett offered invaluable advice fitting for students, professionals, and politicians alike.

This issue of the *YE* would not be possible without the Yale Entrepreneurial Society (YES), which has provided crucial support throughout the entire publication process. For that, we wish to sincerely thank Brad Hargreaves, President of YES, and the rest of the YES staff for their continual support and encouragement. Besides making the publication of the *YE* a possibility, YES, Yale's largest student-run organization, runs an annual $50,000 business competition, invites numerous notable speakers to campus, and organizes innovation summits throughout the year. Finally, thanks are in order for the entire *YE* editing and production staff, who have devoted countless hours to ensure that this issue is one we are all very proud to release.

Enjoy the issue.

Sincerely,

Daena Ramiah and John Loser

OPINION

NEWS

By the Byline

"Every feature of privatization was rotten to the core. You shouldn't use rotten eggs to make an omelette."

— Congressman Ted Strickland (D-OH), on the privatization of the United States Enrichment Corporation through an initial public offering of securities to the public. (House of Representatives website)

"'Water is to grow food. If you don't grow food, how do you eat? That's what we protected and will continue to protect. We truly believe that no one owns the water. Life has no price, so water has no price.'"

– Virginia Museo, an irrigation farmer in Bolivia, whose water rights will go to a private company when the water privatization laws are passed. (CBC)

"Public services are never better performed than when their reward comes in consequence of their being performed, and is proportioned to the diligence employed in performing them."

– Adam Smith, Wealth of Nations

"Access to a waiting list is not access to health care."

– Chief Justice of the Supreme Court of Canada Beverly MacLachlin, on striking down a ban on private health care in the 2005 landmark court case Chaoulli v. Quebec 2005 SCC 35 (CanLII).

"Social Security was a great moral success of the 20th century, and we must honor its great purposes in this new century. The system, however, on its current path, is headed toward bankruptcy."

— George W. Bush, 2005 State of the Union address

"The phrase 'The check is in the mail,' of course, is the euphemism for 'Don't blame me, the post office takes forever to deliver the mail, or at least enough time to allow me to put some money in my account to cover the mailed check.'"

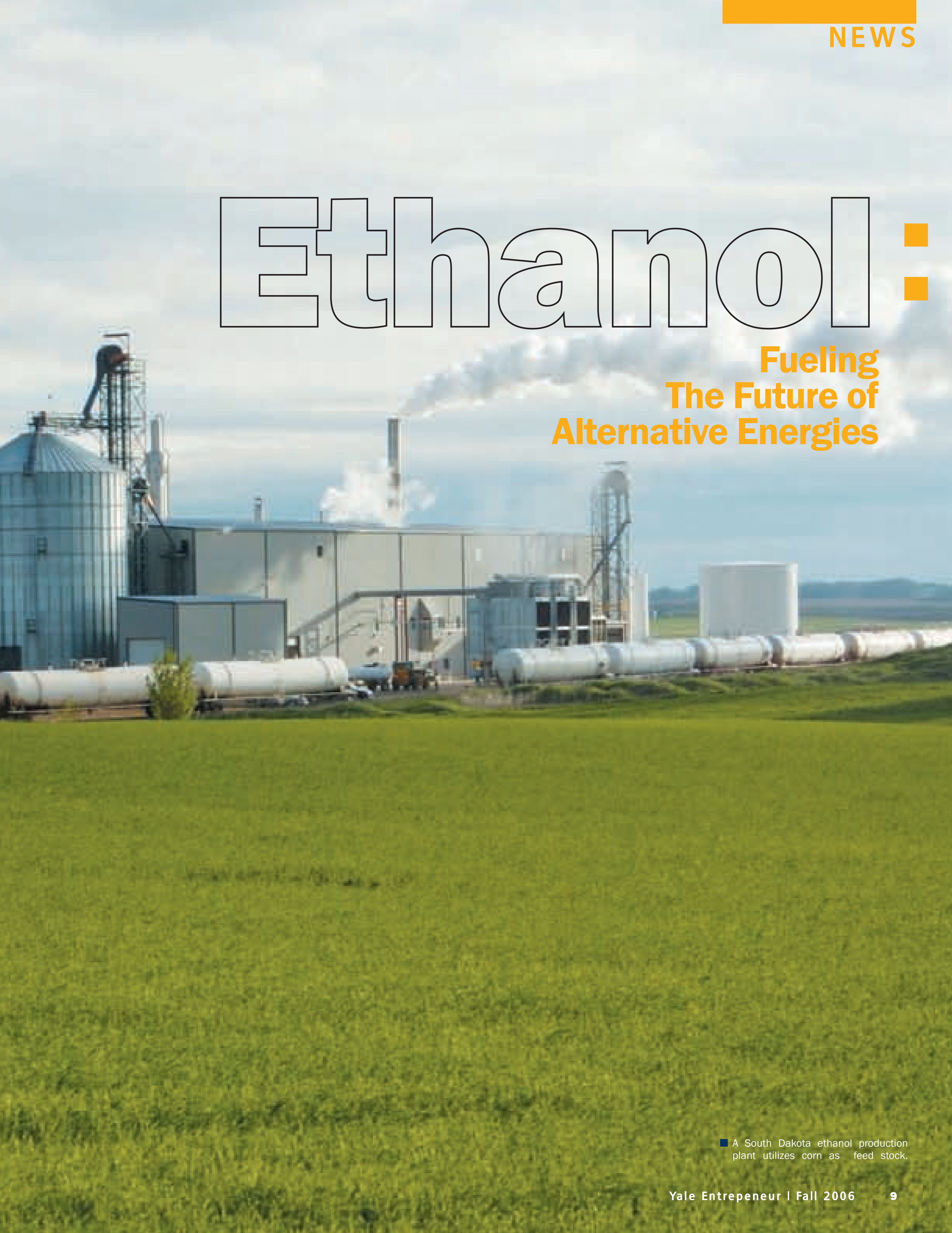
— Dr. Edward L. Hudgins, Director of Regulatory Studies for the Cato Institute, on the inefficiencies of the United States Postal Service (The Cato Institute).

"What we have is a system that is good for Chile but bad for most Chileans."

– An anonymous government official, speaking about the new pensions system, in which people contribute a percentage of their salaries to private investment accounts that they controlled. (New York Times, January 27, 2005, reported by Larry Rohter).

Ethanol:

Fueling The Future of Alternative Energies



A South Dakota ethanol production plant utilizes corn as feed stock.

By Nadav Night

When President Bush declared "America is addicted to oil" in his 2006 State of the Union address, alternative energy was finally recognized by Democrats and Republicans alike as an urgent political issue. Ethanol—long held by many as a means to help end U.S. dependence on oil imports, boost the agricultural sector, and reduce the environmental damage caused by burning fossil fuels—was quickly propelled to the forefront of the debate as a substitute for gasoline. Yet while the United States has only recently begun promoting ethanol, Brazil blazed the trail in ethanol decades ago and is now the world's largest ethanol producer. Can the U.S. mimic Brazil's success with its own biofuels?

A RENEWED INTEREST

While much hype has surrounded hybrid and hydrogen cars, ethanol—a common form of alcohol derived from corn and other organic materials—has made the deepest inroads of any alternative energy source in the U.S. In 2005, Congress passed the Energy Policy Act, requiring gasoline producers to double the use of renewable fuels by 2012 for a total of 7.5 billion gallons. Additionally, Congress created many incentives for ethanol production and distribution. Consequently, national ethanol production has more than doubled in four years, reaching 4.7 billion gallons a year according to the Renewable Fuels Association, and may do so again by 2010. Today there are 103 ethanol plants in operation and 43 more under construction.

Whereas the American energy "addiction" has only recently sparked policy initiatives committing resources to alternative energy sources, Brazil's government took action long before the U.S.—in the midst of the 1973 oil crisis. During the early 1970s, Brazil depended heavily on foreign imports of oil. However, as a result of the 1973 oil crisis and subsequent jump in the price of gasoline, Brazil's military regime decided to break from oil by encouraging the use of its vast staple crop of sugarcane as a national fuel source. In 1975, for both economic and security reasons, Brazil launched the nationwide National Alcohol Program, offering subsidies to sugarcane growers and forcing service stations in every town of at least 1,500 people to install ethanol pumps.

Most cars can run on a blend of 10 percent ethanol and 90 percent gasoline (E10), but different engines are required for stronger mixtures of ethanol. By the early 1980s, almost all new cars sold in Brazil were made to run on a high ethanol blend. Tania Martuscelli, a Portuguese professor at Yale and a native Brazilian, noted that the programs became "a source of national pride, in that Brazilians saw the creation of ethanol-based fuel technology as something uniquely their own."

While Brazil had previously promoted autarchy and state control over important industrial and financial sectors for security reasons, a shift in political power changed all that. As part of the neo-liberal revolution that swept several Latin American countries during the 1980s and 1990s, the new Brazilian government began to favor deregulation and increased privatization. In the mid-1990s, the subsidies to ethanol producers were eliminated. Without the government propping up ethanol, sales of cars equipped to run only on ethanol went from representing 90 percent of the automobile market to less than 1 percent within just a couple of years.

Ethanol was down but certainly not out. The Center for Sugarcane Technology in São Paolo, founded in the 1970s, continued to work to improve the efficiency of ethanol production, and during the 1990s, it implemented procedures that reduced production costs from 60 cents to about 20 cents per liter of ethanol. Now, despite demanding more trips to the pump (ethanol gets 20 to 30 percent fewer miles per gallon than gasoline), the fuel has regained immense popularity among Brazilians. This is thanks in part to a recent automotive innovation that allows gas customers to shop for the best price between ethanol and gas: flex-fuel cars.

> That together with Congress subsidizing half the cost of installing E85 pumps in gas stations will make ethanol hard to ignore in the coming years.

Flex-fuel cars, first introduced by Volkswagen, allow drivers to use either gasoline or any ethanol-gasoline blend with up to 85 percent ethanol (E85). The demand for this technology in Brazil has boomed over the past two years. Rather than making a long-term investment in a car that either runs on ethanol or one that runs on gas, consumers can have both, with the fuel of their choice changing with fluctuations in price. Sensors in the engine send a signal to the Engine Control Unit (ECU) in flex-fuel cars, indicating the level of ethanol in the fuel line, and the ECU automatically recalibrates spark timing and fuel injection. Thanks to sharp rises in gas prices, 80 percent of cars produced in Brazil in 2005 were flex-fuel, compared to only 17 percent in 2004. With gas prices high and ethanol

selling at half the cost, Brazilians can easily switch to E85.

A FEASIBLE FUEL ALTERNATIVE FOR AMERICANS? What makes ethanol an affordable and viable alternative to fossil fuels in Brazil is its production from sugarcane. Sugarcane ethanol is highly efficient, with minimal environmental costs and a high energy return. To clearly see the energy return from sugarcane, one need only glance at the production numbers. Of the 357.5 million tons of sugarcane harvested in Brazil, 50 percent was used for ethanol production. Each ton of ethanol contains 138 kilograms of sucrose, and when the sugarcane is processed for alcohol, the sucrose generates 72 liters of ethanol. When all is said and done, sugarcane-based ethanol generates 8.3 times the energy utilized in its production.

Back in the States, however, corn-based ethanol fails to reach the same levels of energy return. According to a study conducted by the U.S. Department of Energy, the energy payback ratio of corn ethanol is 1.3; less than one sixth that of ethanol produced from sugarcane. Because corn-based ethanol is the best option for the agricultural climate in the U.S., the benefits of reduced emissions and energy costs will not be comparable to those seen in Brazil.

Moreover, as American ethanol production grows each year, there are several areas of concern regarding the long-term sustainability of corn-based ethanol. First, the U.S. currently lacks the capacity to distribute E85 across the nation. Of the 170,000 gas stations in the U.S., only 1000 stations, concentrated mainly in the Midwest, offer ethanol. Yet installing more ethanol pumps also has its obstacles. As long as oil is the fuel of choice in the States, installing an ethanol pump is a risky proposition for gas retailers, as the cost of installation is upwards of $200,000. Furthermore, the problem here is circular. As long as stations continue to only offer gas at the pumps, consumers will not choose to buy vehicles that support ethanol as a fuel. As long as consumers do not demand ethanol at the pump because their cars run on gas, gas retailers will not take the risk to install ethanol pumps. Consequentially, the lack of a supporting infrastructure has become one of the largest roadblocks to widespread ethanol use in the U.S.

■ Not only is ethanol more environmentally friendly, it is also cheaper than gasoline.

Recent studies have also suggested that the American agricultural sector could not meet the national demand for corn-based ethanol. In fact, if the entire American corn crop was used solely for ethanol, it would still only provide enough fuel to replace 12% of the demand for gasoline in the U.S. With tariffs of 51 cents per gallon on all imported ethanol, foreign-produced ethanol is not an economically viable option; the price of ethanol would ultimately be higher than that of gasoline at the pump. With no change in trade policy, ethanol would necessarily be produced from domestic corn. If this is the case, it is improbable that ethanol will fully replace fossil fuels in the near future.

ETHANOL'S EXPANSION

Nevertheless, hope still remains for ethanol. Congress has authorized a series of tax incentives for retailers who install ethanol pumps at their stations, and the American people have come to realize that the nation's dependence on oil has ramifications across economic, environmental, and political realms. Additionally, after noting Brazil's phenomenal success in integrating flex-fuel cars into its economy, automobile companies have launched flex-fuel cars in the U.S. In the U.S. today, 5 million out of the 200 million cars on the road are flex-fuel cars.

That together with Congress subsidizing half the cost of installing E85 pumps in gas stations will make ethanol hard to ignore in the coming years.But the fate of ethanol as a viable alternative to fossil fuels depends in the end on the actions of the government, the private sector, and American consumers. Regardless of the final outcome of this debate, in the near future when Americans go to the pump, they could very well choose among four options rather than three.

Silver Scholars: a profile

By Victor Wong

Even before the headline-grabbing transformation of its MBA curriculum, the Yale School of Management had defied established practices of business schools nationwide. While most MBA programs discourage undergraduates from directly applying, over the last few years, Yale rolled out the "Silver Scholars Program," which admits a handful of college seniors into a three-year program at the School of Management. Each year has seen increased competition for these limited spots for college seniors, following the wider trend of an increasing number of applicants to the School of Management in the wake of the curriculum reform.

Current students and prospective ones are increasingly turning away from the traditional track and embracing bold initiatives like the Silver Scholars Program. The Silver Scholar, a three-year MBA program, stands markedly against the usual two-year program of most MBAs. Nearly all schools follow a standard curriculum pattern that requires the first year to consist of academic "silos" ranging from marketing to accounting and the second year to consist mainly of various electives. Students usually find time for internships only during the summer. This academic mold is increasingly criticized by corporate recruiters and students for its lack of integration with the "real world."

In contrast, Silvers Scholars now explore a new system resulting from the recent curriculum overhaul. In the first year, students take a series of eight multidisciplinary courses called "Organizational Perspectives" that are structured around various roles, ranging from the Innovator to the Employee to the Investor, to State and Society. In the second year, Silver Scholars leave the classroom for a yearlong internship of their choice. Previous Silver Scholars have interned at Real Networks, Lower Manhattan Development Corporation, and Pfizer among others.

Many also use this second year not just to secure future job offers, but also to take risks. Notably, one scholar has gone as far as starting his own company which offers an alternative web browser. After a year of work and exploration, Silver Scholars return for a third year and re-enter the school as the equivalent of a standard second-year MBA student. By this time, Silver Scholars have accumulated a year's worth of both academic and real-world experience and have studied real-world applications in depth.

The Silver Scholars Program, however, is not without its disadvantages. Unlike peers who have worked at full-time jobs before entering business schools, Silver Scholars who go straight from undergraduate to business school still lack extended work experience. Many face the problem of convincing employers to give them MBA-level compensation as they are without the years of work experience brought by standard MBAs.

In addition, many corporate recruiters remain unsure of where to place Silver Scholars. Several Silver Scholars have expressed concerns that many organizations have structured systems of advancement which leave people from untraditional backgrounds, like the Silver Scholar Program, floundering to find their places and advance. Whereas two-year analysts and consultants are able to attend business school and re-enter the career track with ease, Silver Scholars face the unique challenge of competing against more seasoned MBA students during the job hunt in the final year of business school.

In spite of this challenge, many Silver Scholars are recruited by top organizations. Some go on to full-time positions at corporations such as Citigroup, British Petroleum, and Boston Consulting Group to name a few. Silver Scholars with no extensive work experience still successfully obtain job offers in these fields in large numbers.

The Silver Scholar, a three-year MBA program, stands markedly against the usual two-year program of most MBAs.

Though the Silver Scholars Program competes against popular two-year analyst and consulting programs to attract applicants, several features of the program make it quite appealing to prospective MBAs. First, mentorship is provided during the first year for all students. School of Management professors assist Silver Scholars on an individual basis, for anything from help in specific classes to career advice. Second, the program awards financial scholarships that cover one semester of each of the years spent in the classroom. Finally, many Silver Scholars are able to complete the third year of the program at no cost; the second year employer often covers the cost of the final year, contingent on the Scholar's agreement to return to the company.

Additionally, Silver Scholars often receive offers far exceeding ones they received during their senior year of college. Nathan Huttner, a Silver Scholar, Class of 2009, explains, "If [companies] are willing to take you without any experience, they will definitely take you with experience later." After securing job offers in their senior year, many Silver Scholars opt to enroll at the School of Management, deferring the offer until graduation at which time the offer not only stands but oftentimes also improves.

Still, some college students defer enrollment in the Silver Scholars program to first work for one year. In this case, Silver Scholars lose their scholarship as well as their status, but they maintain the security of admission to one of the top business schools in the nation. They then matriculate to the School of Management

as standard MBA students.

Regardless of what they choose to do, Silver Scholars enjoy the confidence of knowing what awaits them in the career world. They benefit from the ability to work first and return to Yale or to continue their studies before embarking into the real world. Whether or not they plan to head to Wall Street, these business school students have certainly learned at least one lesson—how to hedge their bets.

the new face of Cultural Imperialism

By Diana Wang

Corporate giant McDonald's can be seen everywhere around the world. Here it is shown adjacent to a church in Kiev.

"The world's needs and desires have been irrevocably homogenized."

These forward-thinking words were written by Harvard Business School professor Theodore Levitt in his landmark 1983 essay "The Globalization of Markets." In order to create global economies of scale, Levitt argued, successful global corporations would standardize practices and sell identical products across all nations at optimally low prices. With this declaration, Levitt essentially heralded the onset of a new era—one in which national economic lines would blur and both cultural exchange and cultural imperialism would flourish.

In the ensuing decades, the success of American companies abroad seemed to reinforce the assertions of Levitt's argument. Corporate giants such as Coca-Cola and McDonald's branched out to every corner of the international market, spreading homogenized images of America along with their business practices.

It was during this developmental period that the idea of cultural imperialism—particularly of the American variety—came into existence. Cultural imperialism typically refers to the imposition of domestic values abroad through the spread of consumer products and business practices. All these developments led many to believe, including Levitt, that different national tastes and standards would become something of the past, ultimately meaning that acculturation, accommodation, and customization of business practices and products would become inessential and excessive.

ADDRESSING THE MARKET FOR CULTURAL DIFFERENCES

Peculiarly, today's markets do not

wholly reflect the predictions that Levitt set forth more than two decades ago. Rather than producing a completely homogenous set of goods and services, many American companies have chosen to customize their products in keeping with cultural differences.

Multinationals are increasingly offering products that address regional tastes and customs. Take for example Disney's experience establishing one of its trademark theme parks in Europe. When it opened in 1992, the park offered only American food but refused to sell cigarettes and alcohol—much to the surprise of European parents who were accustomed to having such products readily available. As a consequence, attendance at EuroDisney was abysmally low. Disney eventually realized that replicating American Disney in Europe would not necessarily lead to similar levels of profits. Consequently, EuroDisney opted to begin selling cigarettes and alcohol, a choice more in line with local product offerings. Although many Americans would be shocked to find these products in Disney theme parks, by making this change, Disney successfully appealed to local taste and its European park now thrives.

Even fast-food goliath McDonald's was forced to reevaluate its cookie cutter menus and interior decoration style. In fact, most Americans would probably not recognize a McDonald's restaurant in France, where competition from corner bakeries has forced the company to revamp its design. McDonald's signature golden arches and colored plastic furnishings are curiously absent, replaced by strictly utilitarian tables, hardwood floors, and elegant armchairs. By shifting away from its classic plastic American décor towards a chicer *boulangerie* look, McDonald's in France has been able to attract and maintain a large French customer base.

Even more telling has been the decline in popularity of American TV programs and movies overseas, first noted by *The New York Times* in 2003. Local programs that reflect native culture and tastes have been increasingly occupying prime-time hours, while traditional American media has been forced into secondary time slots. But, Viacom's MTV has overcome the cultural barrier by spawning over twenty networks, each devoted to a unique set of musical tastes according to its respective geographical region.

A POTENTIALLY VALUABLE EXPORT

With the export of national products, it is commonly believed that national values are exported as well. Many Americans would argue this is beneficial in theory— the desolate labor conditions of the developing world and lax environmental regulation are deemed to be in contrast to Americans production standards and values

However, just as American product offerings have been adjusted to local customs abroad by necessity, the values of multinationals have been transformed as well.

So, the hope that U.S.-based corporations would carry the torch of western values abroad has been dashed. When American companies no longer reflect western values, what has become of cultural imperialism?

One of the most notable examples is Google's acquiescence to China's censorship standards in its search results. In order to gain access to China's growing market, Google introduced a mirror site, google.cn, which omits search results that the Chinese government finds objectionable. Many argue that Google has abandoned one of the central tenets of American ideology: freedom of expression. Responding to critics, Google released a statement arguing that "while removing search results is inconsistent with Google's mission, providing no information (or a heavily degraded user experience that amounts to no information) is more inconsistent with our mission." There is little doubt that the alluring prospect of gaining the audience of China's 100 million Web surfers played a major role in Google's decision.

Google reminds us that, ultimately, America's companies are first and foremost motivated by profit, not the promulgation of American values. Past experience has shown that American corporations have taken advantage of laxer labor and environmental protection laws in developing nations, such as the absence of emissions or disposal laws, child labor protection, and minimum wage regulations. Corporations may take advantage of this leniency abroad and evolve into "un-American" multinationals. Rather than paying a minimum wage or disposing of waste in an eco-friendly manner, corporations can pay sweatshop level wages or dump toxic waste in the most convenient area possible–even if that locale is a river or town village.

So, the hope that U.S.-based corporations would carry the torch of western values abroad has been dashed. When American companies no longer reflect western values, what has become of cultural imperialism?

THE ACTIVIST IMPERIALIST

As American corporations abandoned production standards abroad, the role of "cultural imperialist" has been increasingly taken up by activists. Targeting the likes of recognizable companies like Nike and Shell, activists have initiated dozens of brand-based campaigns that have pushed corporations to conform policies to American standards. In place of the corporations themselves, activists have succeeded in exporting American values globally. Though activists do not have the monetary influence of corporations abroad, their true power lies in their sway of public opinion via the media.

One such example activism's power is Chevron's operation in Nigeria. The oil giant recently faced allegations of human rights violations, anti-union practices, and environmental destruction, leading to protests and outcry from several activist groups. Because of these protests, Chevron is now working concertedly to improve its public image, undertaking projects from educational scholarships to HIV/AIDS prevention efforts.

Interestingly, in today's globalized world, American corporations are now more than ever subject to local standards and restrictions—as well as the oversight of the American public. In the twenty years since Levitt published his article, international consumer tastes have remained quite distinct, and consequently product offerings across nations have remained diverse. Moreover, international business standards have not converged to American standards as was foreseen by western optimists. Just as Levitt's predictions were rendered obsolete, the future of cultural imperialism is unclear. But, if current trends continue, it seems that activists will have an increasingly prominent role in how American goods and services are perceived abroad.

the demise of the Print Monopoly

By Chris Gombeski

Print journalists and bloggers regularly trade blows over their roles in the news media world. Bloggers decry the agenda-driven methods used by newspapers, wherein select stories occupy the banner headlines and others are purposefully ignored. In return, newspaper reporters sharply criticize bloggers for their lack of editorial standards and maintain that only print reporters can be trusted since their credibility—and that of the newspapers for which they work—is tied to their journalistic integrity.

When it comes to online news sites, the two sides break down along the same lines. Bloggers treat newspapers like ancient dinosaurs that refuse to adapt and accept the wealth of advantages the internet provides; print journalists condemn the blogging medium that swirls with opinions and uncorroborated facts.

It appears, however, that bloggers may be winning this battle. After peaking in 1987, newspaper readership has been "declining faster than ever" while online readership has been on the up-and-up, according to study commissioned by the Newspaper Association of America. The study reported that "the average number of monthly visitors to U.S. newspaper websites rose by nearly a third in the first half of 2006."

With reduced print circulation, advertising revenues began to slacken, heightening the need for various cost-cutting measures. Not even print giants such as *The New York Times* are immune to these reductions: the *Times* made waves when it announced in July that it would cut 250 jobs and shrink its page size by 1.5 inches to compensate for a 5.8% decline in readership from last year. Other large, metro dailies such as the *Los Angeles Times* have been forced to take similar measures. Doubts remain, however, whether even drastic cost-cutting can sustain newspapers' profitability.

As a result, journalists are hedging their bets. With declining readership and increasingly accessible and high-quality online news, print journalists have been quick to recover from their e-resentment. A bevy of news agencies across the globe are ensuring that their organizations have an ever-increasing presence on the web. The realization that the internet's ability to break news in real-time meant that major papers needed to have fast-breaking stories available long before the print edition made its way to newsstands. Otherwise, news stories would make several rounds in the blogosphere and in the online arms of competitors before ever reaching subscribers' doorsteps.

That is why some newspapermen are paying closer attention to the internet and what it can offer. Newspapers like the *Houston Chronicle* now offer news online in weblogs, and the *Washington Post* allows users to comment on news stories to attract viewership. As MSNBC.com started to offer streaming videos of breaking news, large, metro papers like *The New York Times* also began to upload top stories for web users' daily perusal.

Moreover, media moguls like Rupert Murdoch are also helping to spur innovation in the news business. Early last year, Murdoch, whose holdings include *The New York Post* and FoxNews, pointed out that accommodating the world of e-news is necessary for a newspaper's vitality: "Unless we awaken to these changes and adapt quickly," he stated, "we will, as an industry, be relegated to the status of also-rans, or worse, many of us will disappear altogether." TechCrunch Blogger Michael Arrington echoed Murdoch when he noted a "fear and an unassailable resistance to change" among traditional journalists and called for reporters to start blogging or risk losing their jobs.

Newspaper readership has been "declining faster than ever" while online readership has been on the up and up.

But some journalists are not heeding this warning. For instance, Columbia School of Journalism Dean Nick Lemann recently decided to cut the staff of the Columbia Journalism Review's online news website and instead use those funds to solicit subscriptions for CJR's print magazine. In response, New York University Journalism Professor Jay Rosen dubbed the move a "strategic error" and urged journalists to look to the internet for the future. "In the long run, that's the smarter move," he said.

What could motivate such a seemingly wrong-headed move? To some degree, Lemann might epitomize a journalistic classicism aiming to wrest journalism from the eager hands of bloggers and web-enthusiasts. This "old-media" vanguard sees the unprocessed, unedited content posted on blogs and concludes that it represents a breakdown in credibility. Here, news is unverified and smacks of subjectivity; anyone with a blog can find his opinion amplified, augmented, and transmitted quickly and easily. The blogger's subjective news piece then cycles through the web long before the mainstream press is able to get it to the newsstands.

Yet, there may be hope for classicists like Lemann. Though print media has been pushed into the broadband arena, there is no reason to think that blogging, or the internet news media, can wholly replace hard-copy journalism. Indeed, most view blogging as a supplement to print media. According to the non-partisan Pew Research Center, the number of people who receive their news solely from web sources "is quite modest in size." In other words, the great majority of people still receive their news from print media, a fact unlikely to change in the near future.

College newspapers, for one, are a sector where print still dominates. As *Wall Street Journal* reporter Emily Steel describes, college-campus papers are still reeling in young readers even while national papers struggle to get their attention. "71 percent of college students read at least one of the last five issues of the college paper," while only 46 percent do the same for a national paper. And though college papers still face the problem of decreasing revenues from local advertisers, they have had ease in finding national advertisers who delight at the chance to reach young readers with plenty of purchasing power and are ready to place ads in both print and online editions.

Print news media on the whole may be facing a recession, but its prospect of going completely out of business is highly unlikely. So "old-media" journalism zealots around the globe can breathe a large sigh of relief. Albeit with a newly found sphere of web competitors, the classic print media establishment is here to stay.

454 Life Sciences

an interview with Jonathan Rothberg

By Garrett Spitzer

454 Life Sciences, a local start-up, has transformed the conventional patterns of genome sequencing. YE had the pleasure of speaking with 454 founder Jonathan Rothberg to discuss his latest venture.

THE DRAMATIC BEGINNING

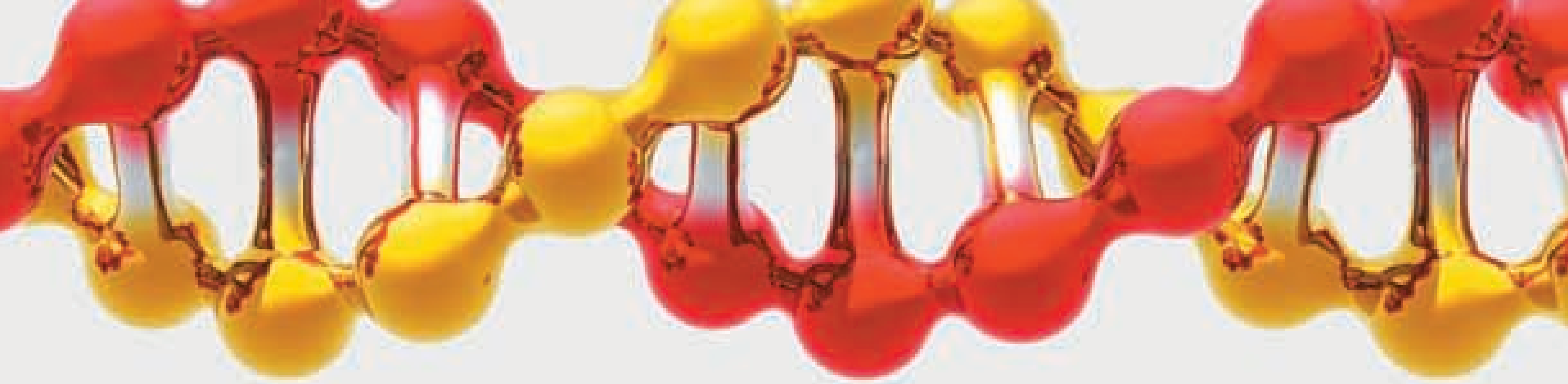
The 454 Life Sciences story began seven years ago when Rothberg's son was rushed to a newborn intensive care unit.

Rothberg recalls this particular event as the instance when he first conceived his innovative business, 454 Life Sciences. "Staying up all night, and reading a computer magazine, I was struck by the number of transistors on the latest Intel chip. All the while I was wishing I could just sequence my son's genome, and I made a few connections. I was intrigued…by the thought that current attempts [were] simply [the] wrong approach."

Prior to the advent of 454, genome sequencing had been undertaken only by brute force—it was believed that in order to sequence genomes faster, the only solution was bigger, better computers. After this momentous evening, Rothberg decided to change this assumption.

THE PREMISE

When Rothberg's son was released from the intensive care unit, Rothberg



used the next two weeks to develop his groundbreaking technology: a chip that would wholly change the process of genome sequencing. Using the firefly enzyme luciferase, Rothberg's chip stimulates each piece of DNA to emit a flash. Based on the positions and timing of these flashes, the entirety of the genome sequence can be recorded and reconstructed. Rothberg also discovered that flow channels, used in neuroscience, would be perfect for delivering the reagents needed for sequencing. The final breakthrough was using limiting dilution to isolate individual molecules so each molecule could be stimulated independently.

MULTI-TASKING

As impressive an undertaking as 454 Life Sciences is, it is not the only company that Rothberg has built from the ground up. Rothberg is also responsible for founding a biopharmaceutical company, CuraGen Corporation. "Since I was the founder, CEO and Chairman of CuraGen at the time of my [454] invention," Rothberg commented, "I focused on creating an independent company so the people who worked at CuraGen knew their job was to make drugs, and the people at 454 knew their job was to make sequencing machines," he said. "Since its inception, 454 has operated as an independent company, with its own board."

BRIGHT FUTURES

454 Life Sciences is the first new business to commercialize DNA sequencing. Not since 1980, when Walter Gilbert and Frederick Sanger were awarded the Nobel Prize for their invention of DNA sequencing, had any genome been fully sequenced by a new technology. However, with the arrival of 454's revolutionary chip, this was quick to change. In 2003, 454 successfully completed the sequence of the adenovirus, and genome sequencing as the world knew it was transformed.

Reflecting on his beginnings, Rothberg noted, "I was lucky to hire some amazing people at 454, and they were able to turn my idea into a great commercial technology." Rothberg expects that 454's technology will eventually be able to sequence an entire human genome for as little as $10,000. It seems that with a first-rate team of individuals and cutting-edge technology, nothing but success lies ahead for 454.

Last fall, 454 was awarded the *Wall Street Journal*'s innovation of the year gold medal for its technological breakthrough. Currently, 454 is attempting to sequence the genome of the Neanderthal with the aid of the Max Planck Institute, proving that the future of 454's new technology is nearly limitless.

Music
in a digital era

By Andy Popovici

Digital music has become a hot commodity, spurring a new 21st century gold rush. In 1999, Napster brought music file-sharing to the mainstream and threatened the very existence of the music industry as we knew it until a 2001 lawsuit on behalf of major recording companies shut the music service down. But music listeners and entrepreneurs alike never looked back, and the U.S. music industry has never been the same.

By Napster's peak in 2001, between 25 and over 100 million users were downloading songs using the free software, according to different estimates. When the Recording Industry Association of America (RIAA), the lobbying group for America's recording industry, won its suit in federal court against Napster for copyright infringement, countless new free file-sharing softwares, such as Kazaa, Bearshare, Grokster, and Limewire, filled the void.

Unlike Naspter, these peer-to-peer sofware peddlers had no central server to shut down. So the RIAA took its legal campaign to rein in file-sharing to the downloaders, gaining notoriety for prosecuting university students, dead people, and little girls' grandmothers alike. However, following twin successes in court last year and this summer, Grokster was shut down and Kazaa made a $100 million settlement with the RIAA. While the RIAA is still busy protecting its profits in court, recording companies have also recently learned to cash in from licensing in an increasingly lucrative and legitimate digital music market.

Apple's iTunes store led the digital charge. In 2001 it was the first to legitimize music downloading by striking a deal to pay licensing fees to recording companies in exchange for the right to sell its 99 cent downloadable songs. Following Apple's example, many other companies have begun engaging with record companies and licensing the right to distribute music. Bearshare, a peer-to-peer download service once completely free, now charges a monthly subscription to download copyrighted music and a similar 99 cents to download music for burning to CDs or playing on mp3 players.

However, in this lucrative new market, the competition is fierce. In 2003, Napster got back into the business when software firm Roxio bought the company and retooled its business plan, re-launching it as a legitimate business. Today it claims $100 million in annual revenues and has over half a million subscribers to its download service, which allows users to download unlimited music—but not to share the encrypted files.

Recording companies have been forced to embrace the new music industry.

In September, however, Napster announced that it had hired the investment banking firm UBS to negotiate a possible company sale. It has had a hard time competing with Apple, and the company has been unable to turn a profit. In a market in which innovation and timing are crucial, the company that ushered in the digital music era may fade away a second time. Apple got in early, and it is now the leader in legal download sales, with almost 90 percent of the $1 billion U.S. market.

The real secret to cashing in on the music download market may be vertical integration. In fact, when Apple launched its iTunes Music Store in January 2001, no one expected it to be profitable. Instead, Apple's CFO Fred Anderson said back in 2003, when iTunes was still operating at a loss, that the music store would be a "Trojan horse" for getting people to buy iPods, its real breadwinner. While music bought from Apple's online music store plays on Apple products, songs bought from other online stores typically do not work on its digital music players—giving Apple the advantage of having gotten into the market first. Apple's iTunes store has recently broken even, but Apple's profits have soared on the back of iPod sales. While the entire legal download market is worth only $1 billion, Apple took in $7 billion thanks to iPod sales alone this year, and this figure is set to grow to $9 billion in 2007, according to Merrill Lynch analyst Richard Farmer.

Others have picked up on this idea as well. Attempting to move into the new box rather than thinking outside of it, Microsoft tried to clone Apple's success, linking its MSN Music store with its new Zune player, but it was too late—Apple had already taken control of the market. Microsoft's music store closed in November because of poor reception of its proprietary WMA music format, and Zune is floundering in limited release. "It shows the problems of picking the wrong format in a format war, especially when one format owns over 75 percent of the market," writes Jupiter Research analyst Michael Gartenberg.

New startup Pandora.com, however, came up with an original idea. The company, which creates free Internet radio stations tailored to individual musical tastes by analyzing patterns in the artists and songs the listener likes, also sells a $249 portable Squeezebox that allows customers to listen to their stations at home and charges a $36 yearly subscription for the device. Started six years ago by a couple of friends, Pandora has since grown to over 50 employees—and it's hiring.

Of course, digital music has also made possible a relatively thriving pirated music market. While there are many alternatives for acquiring music for free within the legal gray zone of file-sharing through peer-to-peer softwares, puzzlingly, people are also willing to pay for illegal music. Russian music site allmusic.com, which pays no licensing fees, offers pirated CD downloads for the lowest prices on the Internet other than zero. While the company is reluctant to discuss its earnings, as it is increasingly under attack for copyright violation by the RIAA (which has so far failed to pressure recalcitrant Russia to prosecute, though they may have no choice if they want to join the World Trade Organization), Russian *Newsweek* recently estimated its revenues at $30 million a year.

The FBI also recently busted a slew of counterfeit CD operations and replicating facilities across the nation. One large distribution network recently shut down produced, packaged, and shipped over 12 million discs annually, worth an estimated $120 million. Not counting Internet piracy, the RIAA estimates that the U.S. music industry loses over $300 million a year to physical piracy alone—money that lines the pockets of black market entrepreneurs, provided they can hold on to it.

In the middle of the digital media onslaught, recording companies have been forced to embrace the new music industry. According to RIAA data, CD and other physical media sales peaked in 2000 at $14 billion and declined steadily thereafter, dipping to $12 billion in 2005. By all indications, CDs are set to suffer a not too slow death. At the same time recording companies have seen sales from music downloading grow from $180 million in 2004 to $800 million in 2006. Moreover, recording companies began partnering with telecoms last year to offer mobile phone music, selling half a billion dollars worth of ringtones in 2005 alone. In troubling news for Apple's iPod, cell phone companies have now begun offering phones with all the features of a digital music player. Microsoft has also just announced that it struck a deal with Universal Music and other record labels giving them a portion of the sales from every Zune they sell instead of from songs downloaded. So, while the recording industry has lost out on its traditional revenue sources, such as CDs, it is milking the new wave without too much sweat by just sitting tight and collecting royalties from the lawsuit-fearing entrepreneurs driving the digital music revolution.

The real dinosaurs of the decade are actually the small, independent music stores which can no longer keep up with big retailers. Once the backbone of music distribution, since September 2003 one out of every four specialty record stores and independent record store chains in the U.S. has closed. In a decade and half, these stores have gone from selling 75 percent of America's music to only one third. With customers flocking to online music stores and big box discounters like Wal-Mart who buy in bulk for cut-rate prices, the remaining 2,700 independent music stores now serve an increasingly graying customer base and are either biding their time before they close up shop or trying to grab positions as niche shops for young hipster and art house crowds.

While recording companies are busy suing people, the music industry is being reshaped by innovative start-up companies packaging downloadable digital music in all new ways. We are witnessing the beginning of a new technological leap in music format analogous to the CD revolution that unseated the once dominant cassette tape and relegated it to irrelevance in the '90s (with tapes now representing 1 percent of all sales), just as the cassette had driven its predecessor, the popular eight-track, to extinction by 1983.

The difference today is that this malleable new digital medium has allowed for scores of new services to package music and music devices in as many creative new ways, and it promises to keep them coming. With digital music, so far the business possibilities seem endless. From subscription download services to iPods to radio stations on Squeezeboxes to music-playing cell phones, expect the unexpected from the new music industry which will leave no stone unturned to get our feet tapping.

a conversation with Warren Buffett

By John Loser

Warren Buffett arrives alone, at the wheel of a late 1990s issue Cadillac. He has no security and not much of an entourage, unless his lone personal assistant constitutes a following. *YE* is in Omaha, Nebraska, national headquarters of Buffett's investment company, Berkshire Hathaway, where we had a chance to speak with Buffett and hear his thoughts on investing, privatization, and why everyone should go to public school.

Omaha is Buffett's town. A native Nebraskan who has lived almost his entire adult life in the same modest row house, Buffett is as well-respected within Omaha as he is around the world. Nothing in his mannerisms nor surroundings would indicate that he is the second wealthiest man in the world. He carries himself more like a college professor than a ruthless investor, and in many ways he is just that. While other top investors earned their fortunes as fierce competitors and brilliant innovators, Buffett is more known for what he doesn't do than what he does. His business empire is based on a simple premise: invest in strong companies and stay with them for the long haul.

The opposite of the quintessential day trader, Buffett never makes an investment he doesn't intend to hold on to. He even jokingly calls for "a 100% tax on short-term capital gains," arguing that short-term investments encourage speculation and irrationality over sound financial judgment. Berkshire Hathaway, his private equity firm, rarely sells a company once it has added it to its stable. To Buffett, portfolio companies are like children that have been entrusted to his care. He often acquires them from their original owners—entrepreneurs who built the business from the ground up. As a part of his agreement to purchase these companies, Buffett consents to strict conditions preventing him from selling the company on a whim. This strategy may force him to stick with some dead-end companies, but as he puts it, "when you have more than twenty children, some of them are bound to be disobedient. That doesn't mean you put them up for adoption, it means you focus on how to straighten them out." Buffett believes that a company is more than a dollar figure on a piece of paper—it represents the people, both employees and customers, who have come to rely on it.

"If I could make one amendment to the Constitution, I would require every student to attend public schools."

This concern for the human aspect of his investments is in part what leads Buffett to be skeptical of privatization. He holds no investments in any common areas of privatization, either personally or through Berkshire Hathaway, although he has said he might consider such investments in the future. He follows the nascent privatization movement in detail, looking for any opportunities that might arise. He believes it is an area of rapid growth, but he is waiting to see how some of the early experiments turn out, both economically and socially, before he jumps into the field.

Economically speaking, Buffett believes that the avenues for privatization have been largely overpriced. Citing the recent $3.2 billion dollar lease of the Indiana Toll Road to a private company and a similar lease deal for the Chicago Skyway Bridge as prime examples, Buffett worries that the relative unfamiliarity of these projects has led industry to grossly overpay for public assets. With an investment strategy so focused on value in long-term investments, overpaying for any asset is simply not something he will consider. Buffett believes that as more of these deals occur, prices will inevitably settle down, making these deals far more attractive to a long-term investor like himself. Until then, however, he will remain on the sidelines.

His greatest concern in this new field, however, is not economic; rather, it is the potential social cost of privatization. He believes that profit-seeking private industry might not be the best venue for providing public services. He argues the following about toll roads: "If you're already rich and the choice is between trying to squeeze a few extra dollars out of a guy just trying to get to work and trying to sell him some more Coke, I'd rather deal with the Coke." While a government entity would conceivably operate a toll road at cost--or below cost in the case of the aforementioned Indiana Toll Road—a private company undertaking such a large expense would need to make a sizeable profit to justify its investment. As Buffett sees it, the likely result is a higher cost to the public for the basic services they have come to rely on.

Buffett sees more aggressive privatization moves as dangerous to the public. Providing the situation is right, he is somewhat open to aspects of infrastructure privatization, but he feels that when it comes to basic needs such as water, privatization will never be the answer. Allowing a private company to turn a profit off the provision of such a basic necessity can be a dangerous moral hazard. "If you've got a monopoly on air," Buffett notes, "you'll make money for a while, but eventually you're going to end up [dead] in a back alley somewhere. It's not something we should mess with lightly." He believes that the government is responsible for these basic services because it is imperative that every citizen be granted affordable access. Giving free reign to private industry may lower prices for some and increase service quality for others, but there is a considerable risk that those on the fringes of society will find themselves cut off by profit-driven corporations. Working with the government to resolve these distribution issues is far more productive than simply relieving the government of its responsibilities by turning over services to private entities.

"I want to give my children enough money to do anything, but not enough to do nothing."

However, Buffett does not believe that this mandate against privatization should be limited to new privatization projects alone, nor does he believe public alternatives make private services acceptable. In fact, Buffett believes that the government can and should have a monopoly on a service that has long been provided by both public and private entities. "If I could make one amendment to the Constitution," he says, "I would require every student to attend public schools." Buffett believes that this radical solution is the only way American students will stay competitive in the world labor market. Education, he claims, is the fundamental reason for the meteoric rise of the United States during the last century. In the 20th century, the United States had one of the strongest systems of universal education. This allowed America to tap into a greater proportion of its citizens' abilities than any other nation could at the time. Today, he says, the public education system in the US is rapidly deteriorating, and he quips that "good public schools are like virginity, they can be preserved but not restored." Buffett believes that private schools are the root of this problem. By offering a separate quality of education for the children of the wealthy, private schools are to blame for the deeply-rooted class hierarchy of the U.S. Buffett believes that forcing the children of the wealthy to attend public schools would bring renewed interest to the plight of public schools—from the very people who have the resources to affect change. The infusion of money and political clout that would result from such renewed interest is crucial to making the drastic yet vital changes he believes are necessary to rejuvenate the American educational system.

Buffett's interest in the public good extends to all aspects of his personal philosophy. While he believes that actions such as divestment from Sudan have little real effect on targeted companies, he does ensure that Berkshire Hathaway does not own controlling stakes in any company he finds objectionable, most notably tobacco companies. Buffett also supports government regulation to protect the environment and control climate change; businesses alone will not solve problems without government assistance. He feels that this is not a fault of the corporate world, however. Rather, it is just a fact of life. A corporation's proper goal is profit maximization, and if the government believes that this goal leads to undesirable consequences, then the government must provide incentives and consequences to steer the companies towards a more desirable path.

If Buffett's position on these issues cracks the mold of the standard billionaire-tycoon, his recent decision to give almost his entire fortune to the Bill Gates Foundation shatters it. He notes that charity work is his greatest challenge. "Business," he says, "is supposed to be easy. There are no points for degree of difficulty – your goal is to make money with as little fuss as possible. Charity is the opposite of business. The most important tasks are the hardest ones." Buffett's position on the Board of Directors of The Gates Foundation has allowed him to tackle pressing problems—ones that have not been solved even by the brightest minds in the world. Buffett relishes this opportunity, and he believes that donating his fortune to charitable causes is far more valuable than bequeathing it to his heirs. "I want to give my children enough money to do anything," he says, "but not enough to do nothing." The rest of his fortune, over $40 billion in all, will find its way to The Gates Foundation's coffers over the next decade, a decade the 76-year old Buffett hopes to live long past. "I'm already one of the richest men in the world," he jokes, "now I want to be one of the oldest."

Regardless of whether he reaches his final goal, Buffett's legacy as a different kind of billionaire will live on. Money isn't a driving force for Warren Buffett, and he believes that focusing too closely on obtaining wealth is the surest way to fail at it. Instead, the key to success lies in constantly seeking to improve oneself—he cites a public speaking class as the greatest investment of his unparalleled career. Whether in investments or philanthropy, Warren Buffett has set a standard for how the super-rich should live. He has demonstrated an ability to build immense wealth through skill and hard work without losing his perspective on the truly important things in life.

In September 2006, a government welfare office in Tel Aviv asked a Kabbalah rabbi to come in and pray for increased efficiency. After failing to meet benefit distribution deadlines—and receiving a litany of angry letters from incensed citizens—the officials running the welfare office felt that prayer was their only hope.

Frustrated citizens and government administrators the world over at one time or another have probably been tempted to emulate Tel Aviv's tactics. From Berlin to Boston, the most basic transactions between citizen and state—paying taxes, receiving a public education, obtaining health care, even the simple act of voting—too often become cumbersome processes that can end in quagmire or failure. Even Germany, notorious for efficiency since the days of Bismarck, has seen its citizens consistently reporting dissatisfaction with the quality of services received from the state. Birgit Unger, a law student at the Friedrich Alexander Universität in Erlangen, Germany, noted, "We know the government won't give us what it told us it would give us . . . Even here in Germany where trains run on time and the public schools are good, we wonder why it is that the government consistently acts either like an irresponsible child squandering our tax money or like an old, lazy man unable to act quickly and dynamically."

All of these examples beg the question: when it comes to reforming state services, is praying to God our only hope?

The Profitable Sa

A case study of the East Riding, Yorkshire

THE CORPORATE GOD: A CASE STUDY

Much like the heads of the Tel Aviv welfare office, the elected councilors of the East Riding of Yorkshire, a local authority in the north of England, were struggling to meet their citizens' expectations. Instead of calling out to God, however, in 2004 the councilors decided to reach out to a slightly more tangible demi-deity—the private corporation. After a competitive bidding process, the municipal council outsourced eight important departments—Revenue Services, Financial Assessment, Creditor Services, Human Resources, IT, Print and Design, and Customer Service—to arvato AG, a German firm with more than 250 subsidiaries in 28 countries. Under the terms of the eight-year contract, arvato agreed to meet the council's service specifications and took on 500 municipal employees who transferred to arvato on their existing contacts.

Two years into the partnership, the results of this public-private marriage of convenience have been impressive. Services have improved, costs have dropped, and much of the government's risk has been transferred to the company. Whereas before the partnership only 88 percent of requests were answered within ten days, now 99 percent of requests are answered within that same timeframe. To top things off, arvato has promised to bring 600 additional jobs to the region. Though some issues of organizational integration remain to be solved, the arvato-East Riding public-private partnership (PPP) proves that under the right circumstances, private companies can do the work of government—even more effectively than governments themselves.

THE CENTRALITY OF COMPETITION

To understand the theory behind public sector outsourcing, one need only compare the efficiency of local, state, or national government to that of a company like General Electric or Coca-Cola. While the government

Sonopress, a subsidiary of the arvato storage media group, is actively processing orders for HD-DVD. The German company arvato AG is now peforming much of the public service for East Riding of Yorkshire, showing the private sector's capacity to perform jobs for the public sector.

amaritan

By Eleonora Sharef

has a monopoly over the services it provides (taxpayers send checks to the IRS because there is no other tax agency), GE is forced to compete with other companies on a daily basis. It is crucial for GE to achieve a high profit margin and maintain low costs, high productivity, constant innovation, and happy customers. As its former CEO Jack Welch famously noted, companies are always trying to come up with new ways to be the number one or two in their field. If the government faced competition, it too would be pushed to run more efficiently, and act less like the bureaucratic machine to which it is often compared. Not only would citizens receive services in a timely manner, but cities and towns would benefit from the higher levels of innovation that arise naturally in a competitive environment.

PUBLIC-PRIVATE PARTNERSHIPS

In practice, public-private partnerships (such as that in the East Riding) attempt to harness the proprietary business tools of large corporations—human capital, experience, financial resources, industrial influence—in order to improve the public sector. How are these deals implemented? In the case of arvato, the process was fairly simple. First, in taking over the East Riding's accounting, human resources, printing and IT, arvato agreed to reach certain key performance indicators. As such, arvato promised to pay fines or subject its contract to termination if it failed to meet the specified requirements. Pressure to perform skyrocketed, and service levels improved accordingly. In a contractual environment where sending a payroll slip a day late or failing to repair an IT problem within the allotted timeframe can cost hundreds of thousands of dollars, managers and staff alike realize that their job security depends on staying ahead of the competitive curve.

Additionally, arvato pledged to use its private-sector expertise to improve the local authority's services. As one of the world's biggest private-sector service providers, with clients ranging from Google to Microsoft, arvato knows the ins and outs of customer service and logistics. By bringing so called "business process experts" from arvato to the East Riding, the firm has made waves and introduced proven private-sector strategies to the sphere of government.

Finally, employing its considerable industrial influence, arvato has agreed to bring 600 jobs to the East Riding in order to receive its final remuneration. To accomplish this task, arvato will open new call centers in the area and incentivize other companies to move their operations to the region as well.

THE DRAWBACKS

Though the work of companies such as arvato clearly demonstrates the promise of public sector outsourcing, those interested in using the private sector to improve the public must proceed with caution. Calling in the corporations is no magic panacea, and in fact, sometimes outsourcing can cause more harm than good.

In looking back at the performance of PPPs in the UK, where they have been most widespread, it is easy to see areas in which the partnerships have fallen short. When John Major, and later Margaret Thatcher, pushed for PPP initiatives in the 1980s, their rationale was not service improvement but merely cost and risk transfer. Stifled by debt in those years, Britain was in no position to provide citizens with the services they expected. Enter the private sector—under Thatcher's ground-breaking Public Finance Initiative (PFI), private companies were allowed to build and operate public institutions and then rent the finished project back to the government, often for terms of twenty to thirty years. Whereas bridges, hospitals and roads were previously built by the private sector but financed and operated by the government, PFI projects were built, financed, and operated entirely by private companies.

Since companies, not the government, took on costs in the short run, PFI made it possible for the British government to build more bridges, schools, and hospitals without immediately increasing taxes. However, this simply means that the government entered into long-term contractual debt that has yet to be repaid. Worst of all, the debt is not even listed on the UK's balance sheet since it is not considered a new transaction but simply a payment for services. This loophole has allowed for huge off-balance sheet borrowing that will almost certainly haunt the U.K. in future years. Though the ruling Labour party in England was originally opposed to PFI, it eventually succumbed to the allure of "free" infrastructure improvements;

today more than 500 deals with capital value of over £23 billion (almost $44 billion) have been signed. According to Michael Mainaelli, manager of London-based consulting firm Z/Yen, these contracts amount to some £100 billion (nearly $190 billion) of off-balance sheet borrowing. As Mainaelli points out, "PPP are providing jam today for the government, but committing the UK public sector to significant future payments."

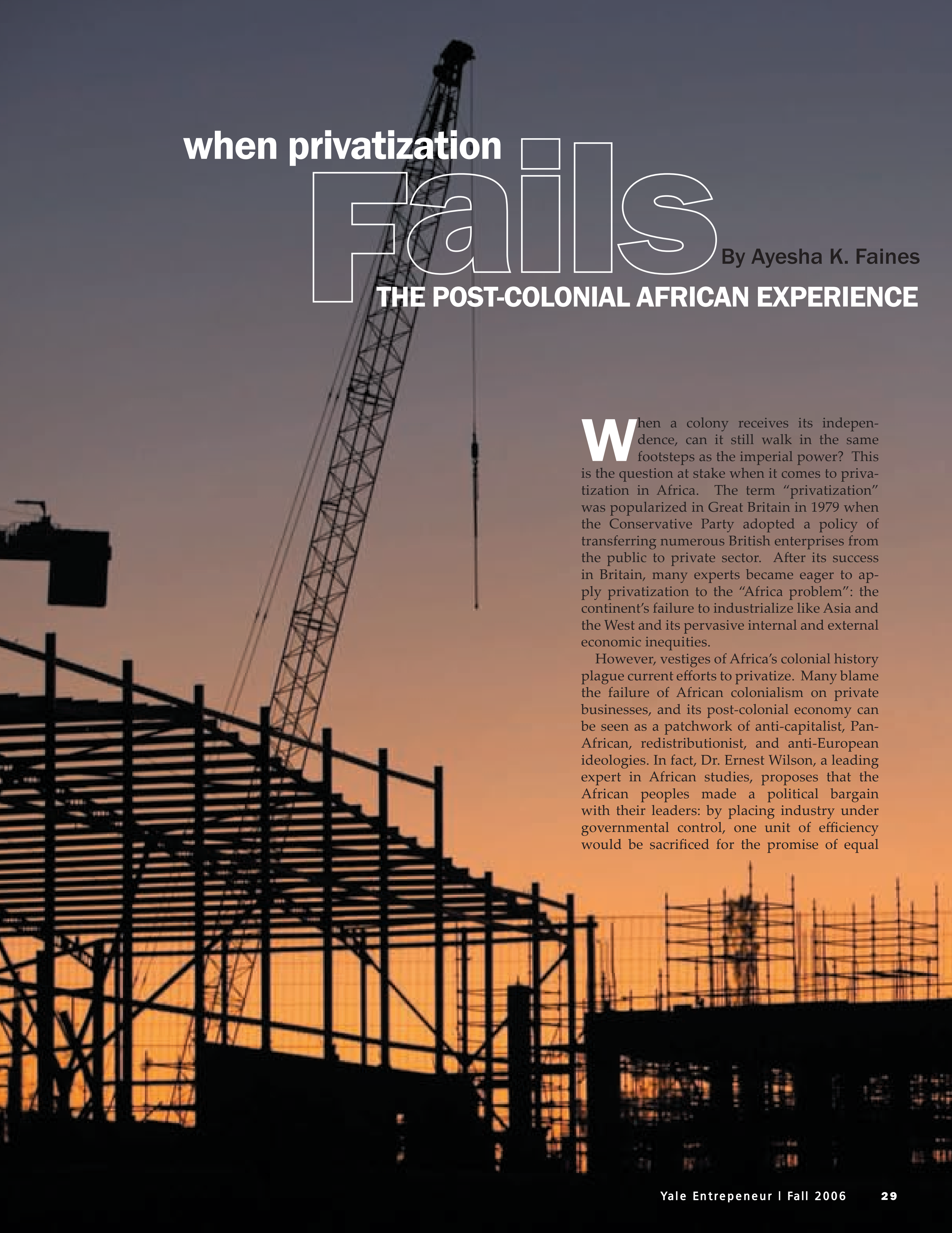
Off-balance borrowing is not the only problem with PPP and PFI projects. First, the tendering process is not very competitive, since only a handful of companies—often those involved in political lobbying—get nearly all the deals. If the point is to improve service provision by fostering competition, then this tendering process defeats the purpose for which the private sector was brought in. Second, governments often fail to define the conditions of PPP contracts in explicit terms, leaving gaps which profit-maximizing companies will naturally seek to exploit later. Finally, politicians are sometimes too embarrassed to admit they have made a mistake in entering into an agreement with a specific company and therefore prefer to sweep the matter under the political rug instead of holding the company accountable for its errors.

From Berlin to Boston, the most basic transactions between citizen and state...too often become cumbersome processes that can end in quagmire or failure.

FINDING A MIDDLE PATH

Despite these problems, public service outsourcing to the private sector has a great deal of potential. Although partnerships have had their historic difficulties, they may well be the best shot at bringing government services to a level commensurate with the private sector. Yet steps must be taken to ensure that both private and public parties are committed to a truly mutually beneficial partnership. On the public side, governments will continue to face scrutiny if they persist in off-balance sheet borrowing. If the government considers the bridges, roads and schools built by the companies to be good investments, then it should also be willing to list them in its financial accounts. On the private side, corruption, lobbying and fraud continue to be major challenges. Rod Aldridge, CEO of the U.K.'s biggest public sector outsourcing company, recently made one of the heftiest donations to the Labour Party, a suspicious act at best. Finally, it is unclear if citizens and government officials—in the U.K. or U.S.—are willing to accept PPP's basic premise: competition. Government employees who have grown accustomed to low productivity, lax accountability, and guaranteed job security will have to work harder in the private sector. Employees must also accept that they will be subjected to more frequent performance reviews and less restrictive hire-and-fire policies.

If citizens can come to accept that governments can improve significantly by using the tools of the private sector, then we will have made major progress toward achieving more perfect societies. Yet unless we ensure that the implementation of public sector outsourcing initiatives is informed, transparent, and competitive, we will dig a deeper grave than we have today. If this proves to be the case, we might indeed need the help of the Kabbalah rabbi all the same.



when privatization Fails

THE POST-COLONIAL AFRICAN EXPERIENCE

By Ayesha K. Faines

When a colony receives its independence, can it still walk in the same footsteps as the imperial power? This is the question at stake when it comes to privatization in Africa. The term "privatization" was popularized in Great Britain in 1979 when the Conservative Party adopted a policy of transferring numerous British enterprises from the public to private sector. After its success in Britain, many experts became eager to apply privatization to the "Africa problem": the continent's failure to industrialize like Asia and the West and its pervasive internal and external economic inequities.

However, vestiges of Africa's colonial history plague current efforts to privatize. Many blame the failure of African colonialism on private businesses, and its post-colonial economy can be seen as a patchwork of anti-capitalist, Pan-African, redistributionist, and anti-European ideologies. In fact, Dr. Ernest Wilson, a leading expert in African studies, proposes that the African peoples made a political bargain with their leaders: by placing industry under governmental control, one unit of efficiency would be sacrificed for the promise of equal distribution of goods, services, and opportunities.

However, in spite of this fear of the private sector, most African governments have either undergone or are currently pursuing public divestment. Indeed, the twin cases of Nigeria and Sudan particularly exhibit this conflict, underscoring the problematic nature of African privatization.

The Financial Times once called Nigeria's experiment in financial policy "the most radical in Africa." As part of a structural overhaul plan launched in 1988 by Nigeria's ambitious military regime, 101 state-owned enterprises (SOEs) were to be privatized and an additional 33 designated for partial or total commercialization. There was a threefold rationale behind Nigeria's move to privatize: to lessen the burden of SOEs on the treasury, to reduce spending in the steel sector, and to increase participation of the private sector in the petroleum, gasoline, pulp, paper and sugar industries.

Though none of these goals were realized, the enhancement of the private sector did stimulate the economy and the Nigerian Stock Exchange. Also, the controversial and often unfair marketing boards were liquidated, potentially reducing the scope of political graft.

Unfortunately, the failures of Nigeria's privatization have outweighed the benefits. Even though the government has boasted that 800,000 new shareholders have been created, evidence suggests that these shares are held by a small number of wealthy Nigerians. The quality of goods decreased at the same time that prices increased, and government ministries continued to supervise the private sector despite contractual performance agreements. The largest of the SOEs—the steel and sugar mills—continue to rely entirely on the government.

The dearth of coordination with regulatory policies and effective laws in Nigerian fiscal reform proved a primary impediment to success. The laws in place were not conducive to a competitive, market-friendly environment, but instead hindered entrepreneurship and development in the private sector. It is also possible that Nigerian civil servants, the same group who profited from the 1970s oil boom, found the risk of completely relinquishing their control too precarious.

SUDAN'S PRIVATIZATION DEBACLE

Like Nigeria, Sudan also had straightforward reasons for implementing fiscal reform. Beginning in the early 1970s, the government was saddled with a budget crisis and borrowed heavily both at home and abroad, primarily through The Bank of Sudan. Consequently, inflation rose and government debt skyrocketed, from $1.2 billion to $8.3 billion. The IMF and the World Bank urged the government to adopt their Economic Recovery Program, and the international community closely watched Sudan's policy adjustments. Yet no amount of scrutiny could fix the Sudanese economy in the face of long periods of drought, the outbreak of civil war in the southern region, and political instability. Indeed, between 1985 and 1989, the economy collapsed.

During the 1980s, privatization efforts were implemented on a purely political and ad-hoc basis. The current government, which took power in 1989, continued with the efforts to revive the economy. Sudanese leaders adopted a more pragmatic approach this time and focused on privatizing the agricultural, banking, energy, hotel and tourism, transportation and commerce, and trading and marketing sectors. However, out of 124 businesses earmarked for privatization between 1990 and 1993, only 27 were released from the state by the turn of the century. Thus in terms of both value and volume, Sudan's second attempt was also a grave disappointment.

Sudan has been limited by its own political, economic, and social restraints. Monetarily, Sudan's lack of efficient capital hindered its ability to privatize by selling equity. The huge numbers of struggling private enterprises (PEs) were unattractive to investors and the lack of raw material inputs in Sudan created an economic bottleneck which proved lethal to entrepreneurial potential. Furthermore, insufficient infrastructure significantly contributed to the downfall of rural PEs, as they simply could not be easily reached by transportation sources.

Furthermore, socially, privatization bred significant distrust between the people and the government. Evidence of concealed public offerings and devalued IPOs created to favor certain bidders sparked rumors that the government was employing privatization to transfer the bulk of wealth into the hands of a select few. Government actions also indirectly contributed to the layoff of thousands of Sudanese workers as companies downsized firms to compete in the private sector.

With civil strife in the South, continued UN sanctions, and pressure exerted by the international community over potential government-sanctioned genocide, Sudan faced many political problems on the road to privatization. Though the 1998 construction of a Chinese oil pipeline through Sudan generated substantial income, the formerly money-strapped country still lacks the trust of the majority of the international community. Furthermore, the benefits of the current economic boost are felt primarily by those in control and the professional elites of the Khartoum region.

A CAVEAT ON PRIVATIZATION

Programs for privatization in developing countries in many ways resemble programs for reform. In an ideal world, the shedding of public enterprises creates the opportunity to increase economic efficiency and growth. However, this fiscal policy needs the proper environment in order to flourish. Before privatization can work, a country must have a sufficient GDP and per capita income, a strong private sector that can support divestment, and government legislation that promotes efficiency, competition, and the separation of business from government. Most African countries, however, lack these necessary factors.

The cases of Nigeria and Sudan highlight the results of attempting to privatize in environments where too many essentials are lacking. The main flaw with the privatization ideology is that privatization can be successful as long as a healthy private sector is in place, even if alongside a weak public one. But as we have seen, it takes two good legs to walk: the private sector must first be nurtured and the philosophy of efficiency and regulation must be established in the public sector. This is why Great Britain experienced promising revitalization after only nine years of their privatization agenda, while many developing nations around the world still stumble.

The problems in these cases do not lie with privatization. Privatization works in a productive society. However, hundreds of years of problems cannot be resolved with a few scholarly arguments. African nations need to find their own identities, outside of the international lens, and nurse each sector into good health before privatization can be successfully undertaken.

The oil industry, an important source of revenue for several African nations, including Nigeria, was one of the main targets for privatization.

A FRESH LOOK AT Privatize

Setting The Curve or Turning The Pro

d Education

ofits?

By Gary Dyal

If the public school system were a business, it would have gone under long ago. Yet some school reformers believe the only way to save public education would be to make it just that. While there is a general consensus that the American public school system is failing for far too many of its students, disagreement persists regarding the best way to fix this problem.

"A" FOR EFFORT?

Among the proposed solutions are federal mandates to increase school accountability such as the No Child Left Behind Act as well as voucher programs that provide students and parents a greater degree of educational choice, thereby increasing competition among schools. A more controversial option would be to place public schools in the hands of private companies and rely on the power of the market to drive educational improvement. Such attempts to privatize education have been met with a degree of mistrust, but given the current condition of America's schools, no solution would be rejected if it could cheaply and effectively educate the nation's youth.

Like charter schools and voucher programs, privatized education should, in theory, provide students and parents with increased school choice while at the same time exerting competitive pressure on public schools and providing them with innovative examples of schools that work. However, unlike the other two programs, privatized schools are run for profit. Private education companies are hired by public officials to take over failing schools and run them using the same tax dollars normally spent by the government. With specially designed education programs, these companies attempt to increase educational quality and student performance while simultaneously cutting costs using economies of scale. Once they have proven the success of their programs, these companies hope that increased demand from the government will allow them to turn a profit for investors.

A BRIGHT IDEA AT EDISON

This idea was first put in action in 1992, when Chris Whittle, former publisher of *Esquire* magazine, invested $50 million to found Edison Schools, Inc. Edison Schools spent three years developing its education program, which includes a longer school day and school year, extensive teacher training, and the use of continuous student assessment as a mechanism to guide instruction.

According to Benno Schmidt, former Yale President and Chairman of Edison's Board of Directors, the main way that Edison differentiates itself is through its emphasis on accountability. "We try to make everyone involved with the school involved in its success or failure," he said in an interview with the *YE*. This includes everyone from administrators and teachers to parents and students. Schmidt claims this idea is a departure from the mentality of traditional public schools, where "no one is accountable." Currently the largest private education provider in the country, Edison is confident its program will improve the education of the over 285,000 students it will serve during the 2005-2006 academic year.

"We try to make everyone involved with the school involved in its success or failure."

A MODEL DEBATE

Despite Edison's optimistic outlook, its model is not without its critics. Several groups have responded strongly against the ways in which companies like Edison are changing the education arena. The National Education Association (NEA), one of the strongest lobbying bodies in the United States, "is strongly opposed to privatization because of the threat that it poses to the quality of education, the accountability of public schools to the communities they serve, and to the well being of children in school," according to their website.

At present, Edison and its competitors represent only a tiny percentage of the education market, but the NEA asserts that these companies, when combined with the voucher movement taking place in several states, "amount to an attempted private sector takeover of the entire system of public education." Opponents further contend that the economies of scale employed by private companies to save money reduce the effectiveness of schools. They fear that the companies will attempt to save even more money by cutting corners on important costs such as teacher salaries and care for special needs children in order to transform government funds into an ever-larger profit.

Even those who support other forms of school choice have voiced concerns about privatization. Ted Sizer, former Dean of Harvard's Graduate School of Education, supports the innovation stimulated by voucher programs. He raises objections, however, when profit is brought into the equation. "It puts the investor at the head of the list," he explained in an interview with *Frontline*. "Under a system of compulsory education, and the compulsion provided by the state, the children should be at the head of the list." People like Sizer worry about the quality of education children will receive when the primary concern of education providers is maximum payoff for investors.

Yet, the tradeoff between quality education and investor payout could be a false dichotomy. Steven Wilson, a senior fellow of Harvard's Kennedy School of Government and former CEO of Advantage Schools, disagrees with the idea that pleasing investors leaves educational quality as a secondary concern. "If Edison doesn't deliver a product that is unequivocally better than the existing public schools, they will not retain their existing accounts, and they certainly won't be invited to manage other schools around the country," he explained in the *Frontline* interview. Therefore, the interests of children and investors might actually be inherently joined. Given that one of the main advantages of privatization is the degree of motivation for innovation and improvement, private education might even result in a higher quality of schooling than its public counterparts.

Supporters further argue that privatization is nothing new in the public school system. "Education is filled with successful examples of companies providing services that educators like," argued Edison founder Whittle. The government trusts private enterprises to provide it with everything from textbooks and school supplies to food and sports equipment. For example, educators do not think twice about whether Houghton Mifflin's desire to make a profit impairs a student's ability learn from its books. Instead, it is assumed that competition between textbook manufacturers spurs each to produce the best product possible. Supporters of privatization believe that this same logic should be applied to schools as a whole.

WILL PRIVATIZATION PASS THE TEST?

Despite the ideological arguments over privatization, the true test is whether these schools can achieve their twin goals of improving education quality and maintaining profitability. Supporters of Edison and similar companies believe America will be receptive to any system that proves it can produce results. "If we can make our schools work," Schmidt explained when interviewed by *Frontline*, "I think we will cut through all political and ideological opposition."

In order to demonstrate the benefits of its program, Edison hired RAND, a leading independent research company, to conduct a comprehensive study on the performance of its schools. The study, released in 2005, analyzed state test scores at schools run by Edison between 1995 and 2004 and found that given adequate time to implement its program, many of Edison's schools improved student achievement at a faster rate than comparable public schools.

Brian Gill, senior RAND researcher and lead author of the study, reports, "By their fourth year of operation, Edison schools' cumulative test-score gains from the first year were larger than those of comparison schools in both reading and mathematics, and Edison schools generally maintained this relative advantage in later years." This improvement, however, was not without exception, as fairly significant variation among the results achieved by Edison schools on a case-by-case basis existed.

Despite these irregularities, Edison believes that the RAND study "reconfirms results previously reported in Edison's annual reports on achievement." Edison's most recent statistics report average gains of 3.75 percentage points in reading test scores and 6.85 percentage points in math test scores between the 2003-2004 and 2004-2005 school years, rates which Edison claims are around twice the improvement rates of the states where the schools are located. While these statistics appear promising, several critics have argued that the method of analysis employed by Edison prevents an accurate measure of student improvement. According to *The New York Times*, Edison's aggregation of statistics across grade levels, states, and even different tests reduces the effectiveness of the provided numbers.

Even if Edison's claims of success in the classroom are accurate, the company has yet to realize the goal by which its success will ultimately be gauged—profitability. Only profitability will encourage competitors to enter the

market, providing the competition and incentive for innovation necessary for privatization to aid America's failing public schools. However, Edison has been plagued by financial troubles since its founding. Unexpected increases in administrative costs have led to repeated years of losses: the company's stock was traded on the NASDAQ for as high as $40 per share in 2001, but it plummeted to a low of just 14 cents in early 2003.

This nadir came after an enormous disappointment for investors in Philadelphia, where hopes of Edison taking over as many as 70 schools ended with the company taking responsibility for just 20. The plummet of the company's stock price, coupled with a lawsuit by a group of its shareholders, brought what Schmidt calls "a near-death experience." Countless editorials predicted Edison's failure and with it the end of privatization as a viable solution to America's education problems.

Yet Edison has survived, albeit in a less ambitious role. In November 2003, the company was taken private in a buyout that paid $1.75 per share. Since then, it has stopped publishing financial data, focused its efforts on mid-sized markets rather than larger projects like Philadelphia, and diversified its business by starting after-school and summer school management programs.

"If we can make our schools work, I think we will cut through all political and ideological opposition."

AN EDUCATIONAL EXPERIMENT

While this withdrawal from the public sector represents a departure from the noble goals outlined by Whittle at the company's founding, Schmidt believes the positive effects outweigh the negative. "As a private company," he said, "we are much less subject to the ups and downs of what happens to be in the press on a given day and we can also save a lot of money." By going private, Edison has also freed itself from the pressure faced by public companies to constantly expand. This has allowed Edison to focus on what Schmidt believes are the company's greatest strengths: researching and developing innovative and effective ways to run America's schools.

While Edison Schools has been the most prominent figure in education privatization for over a decade, some caution that neither the success nor failure of Edison alone should dictate privatization's role in the future of American education. Marie Gryphon of the Cato Institute believes that because of its bold promises of success, proponents of privatization "have tended to ideologically over-invest in Edison." Just as Edison's success would not mandate the universal adoption of privatization, its failures do not provide a definitive answer to the issue of privatization. After all, Edison is still just a company, capable of falling victim to everything from the vagaries of the market to the criticisms of the press to the poor decisions of its officials. Perhaps one of the greatest benefits of privatization is that if Edison fails, it will not continue operating by inertia, as many of America's public schools have. Privatization allows failed attempts to be quickly discarded, making way for companies who believe they can provide a more effective alternative for fixing our nation's schools.

SECURITY FIRMS + PRIVATE ARMIES

By Thomas Powers

ELIHU YALE HAD IT GOOD. In his fifteen years as governor of Madras, then administered by the British East India Company, he managed to purchase the base from which Lord Clive led his conquest of India, get fired for insubordination, and make off with pockets full of cash. Lately, American security contractors have been following in Eli's footsteps—and reaping similar profits.

Though they operate largely outside of the public eye, private security corporations have managed a significant share of operations in Iraq. Private groups organize helicopter patrols, defend convoys from roadside attack, and guard strategic assets such as oil wells; more controversially, they also guard prisons and interrogate prisoners. With nearly 20,000 active personnel in the country, these "soldiers of fortune" comprise the second largest force in Iraq after U.S. troops.

Why would American corporations and private citizens get involved in such a risky enterprise? Like most hired guns, they are profit-driven. Salaries for combat forces can reach $255,500 and are often completely tax free. By contrast, a high-ranking enlisted soldier with ten years of experience can expect to earn around $60,000. Perhaps because of this discrepancy, most private soldiers are up as soon as their contracts with the military expired.

Where did these Wild West-style firms come from? One such company, Blackwater, was co-founded in 1997 by Gary Jackson—a former Navy SEAL—to provide small-scale security services. Blackwater got its big break in 2001 with the U.S. invasion of Afghanistan, when it first sent troops to defend high-value targets overseas. In 2002, the U.S. Navy gave Blackwater $35.7 million to train personnel at its base, which has now grown to over 7000 acres.

Since 2002, Blackwater has grown exponentially. According to *The Nation*, in June 2004 the United States government earmarked more than $229 million for "diplomatic security services" from Blackwater over the next five years, and as of June 2006, the U.S. had already shelled out more than $320 million to the firm. (The State Department has yet to comment on the $100 million discrepancy, and the contract still has three years to go.) Unsurprisingly, management is bullish on earnings. Jackson, who now serves as president of Blackwater, predicts 600 percent growth in the multi-billion dollar industry, and believes that "Blackwater has only scratched the surface of it."

Blackwater is not the only high-performing private military corporation. The entire industry is booming, with annual contracts valued between $10 and $20 billion. One of the largest private military companies, Wackenhut, has expanded its private prison market based on great demand in the United States and abroad. However, while the demand for private prisons spurred an increase in profits at the firm, the sector has been plagued with high-profile scandals. In 1999, Wackenhut lost a $12 million contract in Texas because several guards at a local prison were accused of having sex with female inmates. Such internal scandals significantly harm the industry, highlighting that in any risky venture, success often comes at a price.

The risk holds for individuals in these firms as well: on March 31st, 2004, gunmen opened fire on four Blackwater employees driving through Fallujah. The workers were shot dead and their bodies subsequently mutilated. Peter W. Singer, author of *Corporate* and a Brookings Institute analyst, remarks that "this is basically a new phenomenon: corporatized private military services doing the frontline work soldiers used to do… they're taking mortar and sniper fire." Though contractors receive far higher compensation for their work, they face the same risks of death as ordinary troops.

From the government's point of view, shifting the horror of field work from the public to the private domain may be precisely its strong point. As voters increasingly disapprove of President Bush's handling of the war, the fortunes of private security firms willing to accept the burden of war have nowhere to go but up. Although taxpayers are paying these companies a premium—a total of $766 million as of July—the U.S. government has very strong political and economic reasons for using companies like Blackwater.

One critical advantage of farming out military services is the resulting reduction in negative media impact. With Americans accustomed to the idea of "limited war," casualties incite highly unfavorable publicity. When the death toll hit 2,000 last year, this number did not include the 400 contractors that had died as of last May, according to *The Nation*.

Moreover, even if the contractor body count should garner its share of media attention, subsequent American outrage would be arguably minimal; far less than that over troop deaths. After the murder and mutilation of the four Blackwater employees in Fallujah, Nicholas Von Hoffman, writing for the *New York Observer*, commented that "if you take one-third of a million dollars a year to walk around in somebody else's country with a machine gun, and you get wasted by the locals, I don't think you deserve a very big or elaborate funeral."

Economically speaking, private contracting also benefits the government's balance sheet. "It is clearly cost-effective to have contractors for a variety of things that military people need not do," claimed former Defense Secretary Donald Rumsfeld. Non-American employees play a key role in reducing costs. For instance, the *Manila Times* estimated that the average Filipino worker in Iraq makes only $1,500 to $2,500 per month, whereas an American in the same position could net as much as $25,000 per month. Singer notes, "We do have an international coalition in Iraq, a coalition of the billing. It is a multinational industry in where it operates and where they are from."

A corporate military could also help the United States' international reputation, now tarnished by the incidents at Abu Ghraib and Guantanamo Bay. As private contractors are often held to lower standards than governments and can operate with comparatively little transparency and accountability, the American government can simply disavow knowledge of any private contractor's actions. Additionally, considering the controversy caused by the CIA's use of "waterboarding" as a tactic for interrogation, contractors could be used to employ legally questionable techniques in similar cases. Technically, however, under international law, civilians can also be tried for committing war crimes by any state.

When the Abu Ghraib scandal broke, the Bush Administration sought to limit damage by assuring that the perpetrators would be found and punished by court-martial. Troublingly, some of the alleged wrongdoers were not soldiers at all, but civilians in contractor employ. These civilians, hired as interrogators, do not fall under the military code of justice, nor do they clearly fall under any U.S. jurisdiction, being outside of U.S. territory. While, theoretically, they could be tried under Iraqi law, contractors, like coalition soldiers, are given immunity from prosecution under Iraqi law, effectively

making military contractors the least accountable coalition forces in Iraq.

No charges have been pressed against the contractor accused of raping a teenage prisoner at Abu Ghraib, and he continues to exist in legal ambiguity. Phillip Carter, a UCLA Law School student and former Army officer, says that "[military contractors] actually fall into the same grey area as the unlawful combatants detained at Guantanamo Bay." This is not a result of Justice Department inaction: private contractors have had a long history of non-liability. For instance, during the Clinton Administration, four DynCorp employees were found to have been involved in female trafficking in Bosnia, but they also evaded trial.

While the future of private military contractors is hazy, the issue is becoming more prominent on the political agenda. Representative Jan Schakowsky (D-IL) believes there is a "need for Congress to exercise real oversight on the runaway use of secret companies that have strong connections to the Bush Administration." Assistant Defense Secretary Philip Coyle, who served under President Clinton, described the business of security as "just insidious" and characterized private military contractors as leaving taxpayers holding the bag while responding to "imaginary threats" in an "endless spiral." In the 108th Congress, however, Republicans blocked several Democrat-sponsored bills and amendments calling for greater oversight.

Historically speaking, private military contracting has often proven to be a liability. The Roman Empire, in decline, hired *foederati* to defend its northern borders. While initially successful, this plan led to Rome itself being sacked by former allies, who paid their armies with Rome's own gold. Although the British East India Company was successful in conquering territory and acquiring trade routes, its territorial administration was abysmal. Driven by profit, the Company notoriously built a fortification out of such poor-quality bricks that it had to be razed and built again from the foundations. Of the Company's administration of justice, Adam Smith wrote in 1776: "The difference between the genius of the British constitution which protects and governs North America, and that of the mercantile company which oppresses and domineers in the East Indies, cannot perhaps be better illustrated than by the different state of those countries."

Today, the fate of private military companies lies largely in the hands of Congress. The ability of these corporations to transcend the authority of governments coupled with the huge sums of government funds they receive has brought increasing media attention upon them. This in turn will perhaps increase their liabilities, and thus decrease their prominence in military conflicts. Barring congressional investigation, however, with the Bush Administration's opposition to increasing troop deployments combined with public pressure in favor of troop reduction, companies such as Blackwater will be all too happy to fill the resulting gap.

Windows into the School of the Future

By Joseph Walker

State-of-the-art laptops. Smart identification cards. Hydraulically-rotating rooms. Are these elements part of a high-tech business—or Philadelphia's newest public high school? Earlier this fall, the School District of Philadelphia opened up its latest project, fittingly named the "School of the Future." With its innovative curriculum and technologically advanced facilities—made possible through a unique collaboration of public and private entities—the School of the Future has the potential to completely revolutionize education.

Given all the high-tech innovations in the School of the Future, it is not surprising to learn that Bill Gates, the Microsoft Corporation mastermind, played a key role in the school's founding. When the Philadelphia School District endeavored to create the most ground-breaking school ever conceived, they decided to approach Microsoft, a well-known model of business efficiency. More than three years after this unique public-private partnership began, Philadelphia and Microsoft opened the doors to the School of the Future.

Designed to take advantage of its surroundings, the School of the Future is carefully integrated into the local community. It is situated amidst a West Philadelphia working-class neighborhood, where its 162,000-square-foot facility sits on eight acres of local parkland. The school provides educational opportunities for all members of the community by offering extracurricular facilities and courses for parents and adults before and after regular classes. The School of the Future enrolls high school students through a district-wide lottery system in which 75 percent of students come from the surrounding community. In 2006, the school's inaugural year, more than 1,500 students applied for enrollment through the lottery system. The first freshman class will include 170 students with an expected enrollment of 750 in the future. The current class is comprised of 99 percent African American students, 85 percent low-income students, and 12 percent special needs students. The sole graduation requirement is a completion of a college application.

The School of the Future has introduced a progressive new curriculum, integrated advanced technology into

the learning experience, and promoted conservation and efficiency through its innovative architecture. The School District of Philadelphia's Capital Improvement Plan, a fund totaling $1.9 billion, footed the $63 million cost of the school. Microsoft itself did not donate money, equipment or software, since such a large contribution of free resources was not realistic for a school development program. Rather, the company provided less tangible assets, such as consultative resources and human capital through its network of planning, organizational, and technological leaders.

Microsoft supplied a strategic management team of nearly 50 employees to assist the School District of Philadelphia for the development of the School of the Future. Over the past three years, representatives from both public and private entities underwent a detailed inquiry process designed to gather information and research about education. The representatives created international panels and forums to discuss education and curriculum reform, while simultaneously producing scientific research and studies of various teaching and learning methods and techniques. The best education principles and practices from the findings were then used to develop a progressive new curriculum and education process for the School of the Future.

As the quality of urban education has continued to disintegrate, school boards are embracing a new philosophy which seeks to improve education through emulation of and collaboration with the private sector.

The school's inventive curriculum is very much tailored to individual needs and learning styles. The new curriculum focuses on a learning method based upon research and projects which encourage investigation and discovery. The school day lasts from 9:15 AM to 4:19 PM because research indicates that students do better with later starts. In addition, the school day does not revolve around traditional class times or specific classrooms. Instead, the day is based upon appointments made through special software that allows students to personally schedule classes, meetings, meals, and activities. Using Virtual Teaching Assistant software, students can study electronic lessons on computers which teachers then use to assess their progress. Students learn at their own pace, receiving more challenging work when they make progress or receiving remedial attention if required.

State-of-the-art technology is integrated into every aspect of the student learning process. All students receive a laptop computer and a subsidized broadband internet connection for their home. The laptops, web connections, and completely wireless campus replace traditional textbooks and paperwork, and the "Interactive Learning Center" replaces a library filled with books and magazines. The educational technology reduces costs and provides students with continually updated information. Students also receive a smart identification card which tracks attendance, provides access to the school's facilities, opens smart lockers, and even tracks caloric intake at the Food Court. Technology is also important in the classroom, where traditional blackboards are replaced by smart boards—electronic whiteboards which capture board writing and allow interaction with projected computer images. The classrooms are designed to be as functional as possible, incorporating multiple furniture options and movable walls that enable classrooms to quickly adapt to different learning situations. Even the school's performance center can morph into useful flexible space. When not in use, it hydraulically rotates into two lecture halls. Another notable design feature is the school's central "street," which replaces traditional straight hallways with a more social, simulated urban outdoor atmosphere.

With its innovative curriculum and technologically-advanced facilities the School of the Future has the potential to completely revolutionize education.

The School of the Future's innovative interior design is matched by its revolutionary exterior architecture. Certified silver in Leadership in Energy and Environmental Design (LEED), the school boasts environmentally-friendly structural design and features numerous energy conservation and cost-reducing measures. The school's photoelectric glass not only produces some of the facility's power supply, but also generates real-time data for students to learn about how the saved energy is positively affecting the environment. Photovoltaic panels throughout the building convert sunlight into direct current, also contributing to the electric power supply. Moreover, a portion of the school's roof has a water catchment system to collect rainwater for nonpotable uses, while another part of the roof is covered with grass to shield it from ultraviolet rays. Cabinets are even made from the few trees that had to be removed from the site. The use of advanced technology throughout the facility is critical not only to the new curriculum, but also to the school district's efforts to reduce costs.

A progressive new curriculum, carefully-integrated technological tools, and an adaptive, environmentally conscious facility are all significant innovations in a nationwide effort to improve urban education. Through the implementation of these new strategies, the School of the Future has created a model for education reform. The School District of Chicago, impressed by Philadelphia's newest public high school, has already expressed interest in working with Microsoft to develop its own School of the Future. If Microsoft's efforts prove successful in Philadelphia and Chicago, the School of the Future's model could be replicated in many other cities across the country. These developments reflect a new trend in education reform: as the quality of urban education continues to disintegrate, school boards are embracing a new philosophy which seeks to improve education through emulation of and collaboration with the private sector.

The partnership of Philadelphia and Microsoft in the development of the School of the Future has generated an innovative model for improvement in urban education founded upon a unique and supportive public-private partnership. Such a revolutionary endeavor could not have been completed without the cooperation of the School District of Philadelphia and the Microsoft Corporation. This unique collaboration of public initiative and private consultation made possible the creation of the School of the Future—a ground-breaking approach to public school reform.

The **Education Competency** Wheel

The most significant education tool developed through the collaborative research efforts of Microsoft and the Philadelphia School District is the "Education Competency Wheel," a graphic pie-chart representation of the key factors and strengths believed necessary for success in education, the workplace, and life. The Wheel's core "Education Success Factors" include areas of focus entitled "Individual Excellence," "Operating Skills," "Strategic Skills," "Organizational Skills," "Courage," and "Results." Each of these categories is further divided into specific skills or personal attributes which the School of the Future's new curriculum seeks to teach or improve.

http://www.microsoft.com/education/competencies/default.mspx

State-Sponsored Lotteries
A Gamble With Ethics?

By William Jennings

Gigantic billboards line the highway, proclaiming the latest skyrocketing Powerball jackpot.

Grocery store check-out lanes feature prominently displayed scratch tickets.

State-run lottery commercials and drawings interrupt nightly television programs.

It seems that government-sponsored gambling is a phenomenon that has increasingly permeated our everyday life. Yet this growing entrenchment raises the question: is society a winner or a loser when the government bets on sponsored gambling?

A BETTING HISTORY

Today, gambling is an entrenched part of state operations, with over forty states sponsoring gambling in some form or another. The revenue created through state-sponsored gambling comprises as much as 10 percent of some states' budget. In 2002, revenues from gambling added an astounding $13.6 billion to state budgets across the U.S.

But where precisely is all this additional revenue going? The answer to this depends on the state in question. New York allocates every dollar of its gambling revenue to education, while Pennsylvania, which amasses 31 cents per dollar on gambling revenue, spends the bulk of its funds on elderly citizens' benefits such as transportation aid and housing costs. Like New York, most states collect nearly all lottery revenue for education, with levels reaching as much as $800 million. This seemingly large number, however, is nothing in comparison to what it actually costs a state to run its public education system. In states where gaming revenue is used for education, the lotteries provide only 10 percent of the essential funding. By far the majority of the burden of education funding falls on the local government, which must provide well over half the budget.

DOES THE HOUSE ALWAYS WIN?

Despite the myriad of positive uses for these gambling revenues, many find fault with state-sponsored lotteries and casinos. In 2003, Nevadan Governor Kenny Guinn asserted, "For years, our economy has depended almost exclusively on tourism and gaming, rather than by exporting goods and services. Unfortunately, this strategy has failed…our revenue system is broken because it has relied on regressive and unstable taxes [from gambling]." Annette Meeks of *The Duluth News-Tribune* echoed Guinn's concerns in a 2005 article, where she stressed that the money poured into state-sponsored casinos would have been better spent encouraging more traditional and healthy businesses in the area.

Some skeptics emphasize that a specific portion of the population will be hurt most by gambling. Meeks found that gambling preys on particular demographic segments, stating that, "for gambling to win as a source of revenue for our state, lawmakers are betting that some segment of the population will lose—and will lose big." Guinn expressed this same sentiment when he called the revenue from gambling a recessive tax—one that takes a larger percentage of income from the poor while bolstering the financial standing of the richer segments. The Field Institute's California Poll found that just 18 percent of the state's adults purchased 71 percent of the lottery tickets. These heavy lottery players, buying more than 20 tickets in the contest's first 45 days, obsessed with the idea of immediate riches, are "more likely than others to be black, poorer and less educated than the average Californian," as pointed out by American Demographics. Others suggest that state-sponsored gambling exploits the estimated 12 million compulsive gamblers in the United States.

Recent research has also proved that gambling can negatively effect the surrounding community as well. Professor Earl L. Grinols of Baylor University found that nine years after Atlantic City opened its first casino, crime in the area increased by over 100%. In 2005, Grinols calculated the total social costs of gambling, asserting that it cost the American economy $54 billion annually, due to necessary social programs and law enforcement costs associated with gambling problems.

These figures raise important ethical questions as the positive benefits of additional revenue from gambling are pitted against the potentially deleterious social effects. Yet, does this comparison suggest that state-sponsored gambling should be abandoned all together? Elimination of this form of revenue collection would address the inherent social biases of gambling, but educational funding would also be reduced. It is also possible that outlawing this betting outlet could lead to a spike in illegal gambling activity, creating a host of alternately negative societal consequences. Unfortunately, these costs are difficult to weigh, leading to no easy answer. In the final analysis, it seems that gambling will continue to be a source of revenue as long as citizens are willing to take a gamble and try their luck in the government-sponsored lottery.

goingPostal

Japan's Experiment with Privatization

By Michael Schmale

Fall 2005 marked a considerable shift in the traditional landscape of Japanese politics. Junichiro Koizumi, Japan's prime minister, shook up the established Japanese political process by rallying the nation around a single issue: the privatization of Japan Post, Japan's $3 trillion postal service system. Japanese voters handed Koizumi an effective mandate for his goals and he handily passed this privatization bill.

An expansive proposal such as this requires a phenomenal amount of planning. Whereas most corporations have the advantage of growing organically over time, the architects of Japan Post's privatization must engineer a host of new structures, mechanisms, and regulations from scratch. The most recent privatization plan released by Japan Post has left many wondering: is the current administration up to the privatization challenge?

A CHECKERED POLITICAL HISTORY

The entrenched problems with Japan's postal system are largely rooted in its past exploitation by the ruling Liberal Democratic Party (LDP). The LDP has enjoyed virtually uninterrupted rule since the end of World War II, and corruption has been undeniably pervasive in Japanese politics, particularly in the pre-'90s recession era. Kakuei Tanaka, arguably Japan's most powerful politician in the 20th century, generated his first corruption scandal in 1947 when he allegedly accepted bribes from coal mining interests. He resigned as Prime Minister later that year when faced with an investigation into questionable real estate dealings. Yet the corruption of Tanaka was not an isolated event. Corruption persists to the current day. Perhaps the most infamous scandal in Japanese political history occurred in the '90s, involving the dealings of Shin Kanemaru, a well-known politician since the 1960s. In 1993, police discovered $50 million in funds and hundreds of pounds of solid gold bars stashed under the floorboards of his home.

With this history, it may not be surprising that Japan Post, a government agency, has often been tainted by political corruption. Traditionally a partnership existed between LDP politicians and Japan Post bureaucrats, in which Japan Post became the foremost buyer of low-yield government bonds. This, in turn, would bankroll government spending on public works, the political favor of choice in Japan. Needless to say, this corrupt system took a significant toll on Japan, both economically and physically. Banks responded slowly and ineffectively to the recession brought on by the 1989 crash of the Nikkei Stock Average. Meanwhile, Japan Post lumbered on under the guiding hand of the government, leading to unnecessary dams, highways, and concrete-covered shorelines in the face of a severe economic recession.

PRIVATIZATION: A VIABLE SOLUTION?

In theory, privatization will put an end to this system, though the changes will not likely occur overnight. According to the ten-year road map issued by Japan Post in August 2006, the process of privatization will occur gradually, beginning with the October 2007 division of Japan Post into four distinct organizations—the savings bank (*Yucho*), the insurance company (*Kampo*), the mail delivery company, and the post office consortium. Both *Yucho* and *Kampo* plan to refine current services and expand to offer a fuller range of products in their respective industries. On the banking side, this resolution includes a shift away from solely offering government bonds toward carrying more diverse securities (such as mutual funds), credit card services, and individual and small business loans.

On the surface, these plans appear to improve Japan Post in terms of both efficiency and service offerings. By expanding its range of products and revamping its investment strategy, the *Yucho* branch will provide more competitive services. The end result theoretically will be a more efficient banking system and greater choice for the consumer. Moreover, given the sheer scale of *Yucho*'s assets, the liberalization of its investment policy has given a much-needed boost to Japan's recovering economy.

Yet, a closer look at the latest road map raises significant questions about the effectiveness of actual reforms. As noted in

the *Financial Times*, the profit forecasts for *Yucho* appear wildly optimistic given its steadily declining market share as well as its reliance on government bonds, which are highly vulnerable to devaluation and rising interest rates. Additionally, plans call for increased staffing—a frightening prospect given that the current bureaucracy is often mired in inefficiency.

Nonetheless, the final analysis suggests that Japan may have little to lose from its grand experiment with privatization. In the past, the greatest beneficiaries of a state-controlled Japan Post were the corrupt politicians. Even if reform measures fall short of expectations, the bulk of the benefits could remain. The banking sector will have another player, sparking competition that should improve services for consumers. Ultimately, the newly-privatized Japan Post will need a smooth start to silence its numerous critics and skeptics. Yet if these visionary privatizers meet success, they will have provided an indispensable model of how large-scale privatization can improve the shortcomings and faults of government institutions.

banking on Microcredit?

By Anthony Elson

In his recent book *White Man's Burden: Why the West's Efforts to Aid the Rest Have Done So Much Ill and So Little Good*, leading development scholar Bill Easterly juxtaposed in stark relief two very different approaches to economic development. One is the top-down or "planner's" approach to development and poverty alleviation, and the other is a bottom-up or "searcher's" approach.

As an example of the former, Easterly cites the proposal of another renowned development economist, Jeffrey Sachs, to sharply increase official development assistance in support of Africa's attainment of the Millennium Development Goals (MDGs). Professor Sachs argues that massive outside aid is needed to support improvements in health and educational levels, in particular in sub-Saharan Africa, in order for the region to break out of its "poverty trap".

In Easterly's view, this kind of top-down approach to development has been attempted many times in the past and has consistently failed . Instead, he proposes a more humble and piecemeal approach in support of "searchers" or development entrepreneurs in low-income countries who are experimenting with initiatives at the grass-roots level to improve the livelihoods of poor families.

Since 1950s, much of the practice of economic development has been characterized by top-down approaches in the form of International Monetary Fund-World Bank structural adjustment lending and bilateral aid programs, with admittedly mixed results. On the positive side, Professor Easterly seems to ignore that during the last quarter of the twentieth century, significant improvements in real per capita income and poverty alleviation were garnered in much of Asia through the benefits of foreign aid and development loans. In addition, there are many examples of successful campaigns to eradicate disease, such as river blindness in Africa or polio in Latin America, which would not have been possible without significant funding from bilateral and multilateral sources. However, on the negative side, there is also clear evidence of development failures where external aid was provided on a prolonged basis to governments that had a poor track record of policy reform. Also, there were many instances where aid funds were wasted through corruption and administrative abuse.

To some extent, the mixed record on development aid reflects shifting emphases over time of institutions such as the World Bank. For example, during its first two decades of operation, the Bank viewed capital accumulation and infrastructural development as the key to economic development and disbursed its loans accordingly. Later, in the late 1960s, the focus shifted to agricultural development as the source for economic growth. This phase was followed two decades later by an emphasis on macroeconomic fundamentals ("getting the prices right") and structural adjustment which were delineated in the so-called "Washington Consensus."

More recently, the emphasis has shifted once again to the importance of good governance and sound institutions—for example, the protection of property rights—in the development process. While each of these phases can be shown to be an essential feature of successful development, they may not be sufficient conditions. Nor is it clear how they need to be sequenced or combined.

The mixed record of development practice based on top-down approaches was best captured in a study by the World Bank published last year called *Economic Growth in the 90s: Learning from a Decade of Reform*. In the study, the World Bank examined the uneven record of economic growth in transition and low-income countries over the last two-and-a-half decades and made two very important conclusions. The first was that the general principles that guide development planners today do not translate uniquely into positive development outcomes. The second was that these principles need to be adapted to specific, local conditions, often in an experimental fashion. This is where the role for "searchers" comes into play.

There is also clear evidence of development failures where external aid was provided ...and aid funds were wasted through corruption and administrative abuse.

Perhaps the best known example of a development entrepreneur, or "searcher," is the founder of the Grameen Bank in Bangladesh, Mohammad Yunus, this year's Nobel Peace Prize Laureate. In 1974, Dr. Yunus returned to his native country after completing a PhD in economics in the U.S. At the time, he had certain preconceived notions of what needed to be done to alleviate rural poverty in Bangladesh. However, he quickly came to realize that his ideas of stimulating agricultural development could not be successful in situations where farmers faced severe constraints on access to credit. Individuals in poor rural communities had great difficulty in establishing creditworthiness or faced exorbitant borrowing rates from informal money-lenders.

Nobel prize winner Muhammad Yunus, founder of the Grameen Bank and father of Microcredit.

Dr. Yunus, starting with his own resources, began to make loans to small groups of women who wished to start their own local businesses. Each group would meet weekly with the Grameen Bank and would take joint responsibility to ensure that loan repayments were made. Thus, individual reputation and group accountability became the substitute for collateral or other legal guarantees which the borrowers could not otherwise provide. This example of micro-finance activity, based on local community needs, group responsibility, and accountability, has now been replicated in many poor communities in other countries.

Another example of bottom-up development initiatives can be found in decentralized, participatory budgeting in cities such as Porto Alegre, Brazil and local village councils (panchayats) in the state of Kerala, India. These experiments have involved the devolution of national development funding for development projects to the local government level and represent examples of what sociologist Peter Evans has called "deliberative development." Experience has shown that the effectiveness of local government budgeting has been substantially improved through the participation of local stakeholders in determining the priorities for budgetary spending and the strict accountability of local budgetary authorities to those stakeholders.

In the field of development research, a parallel shift from top-down to bottom-up approaches can also be noted. Typically in the past, development research has focused mainly on the macroeconomic aspects of development in the form of aggregate growth models and statistical testing of the relationships between growth in per capita income, on the one hand, and finance, investment, institutions and trade, for example, on the other. Such research, in fact, has guided some of the shifting emphases of development practitioners, as noted earlier in the case of the World Bank. More recent investigation, however, has emphasized a microeconomic, or bottom-up, approach to development problems. Studies by research institutes such as the MIT Poverty Action Lab have popularized the use of "randomized experiments" to help decision-makers in the design of programs and interventions to improve local schooling and health conditions in poor communities. This new approach is similar to the practice of randomized trials used by the FDA in the approval of new drugs for the US market.

Typically, in the past, aid effectiveness has been judged on the basis of goods and services delivered....not on the basis of its impact on the education and health of poor families.

This bottom-up approach has caught the attention of the World Bank, and recent initiatives in social assistance programs in Latin America have benefited from the use of randomized experiments for the design of Bank-supported programs. Mexico, for example, has been a pioneer in the use of conditional cash transfer (CCT) programs for the poor in which cash assistance grants are conditioned on family recipients meeting certain requirements regarding school attendance and preventive health care for their primary school-age children. The success of the "Oportunidades" program in Mexico has led to similar Bank-supported programs in Brazil, Colombia, Jamaica and Nicaragua. The experience to date suggests that such interventions, with careful preparation and monitoring, can increase school enrollment, improve preventive health care, and raise household consumption.

More generally, the use of randomized trials comparing control and treatment groups can serve to guide practitioners in the implementation of the Millennium Development Goals. Notwithstanding the MDG of achieving universal primary education in developing countries by 2015, there is still considerable controversy surrounding how best to achieve this goal and how much it will cost. Studies using randomized trials have shown, for example, the positive impact of certain interventions on school attendance associated with the provision of free meals or textbooks, or basic immunization.

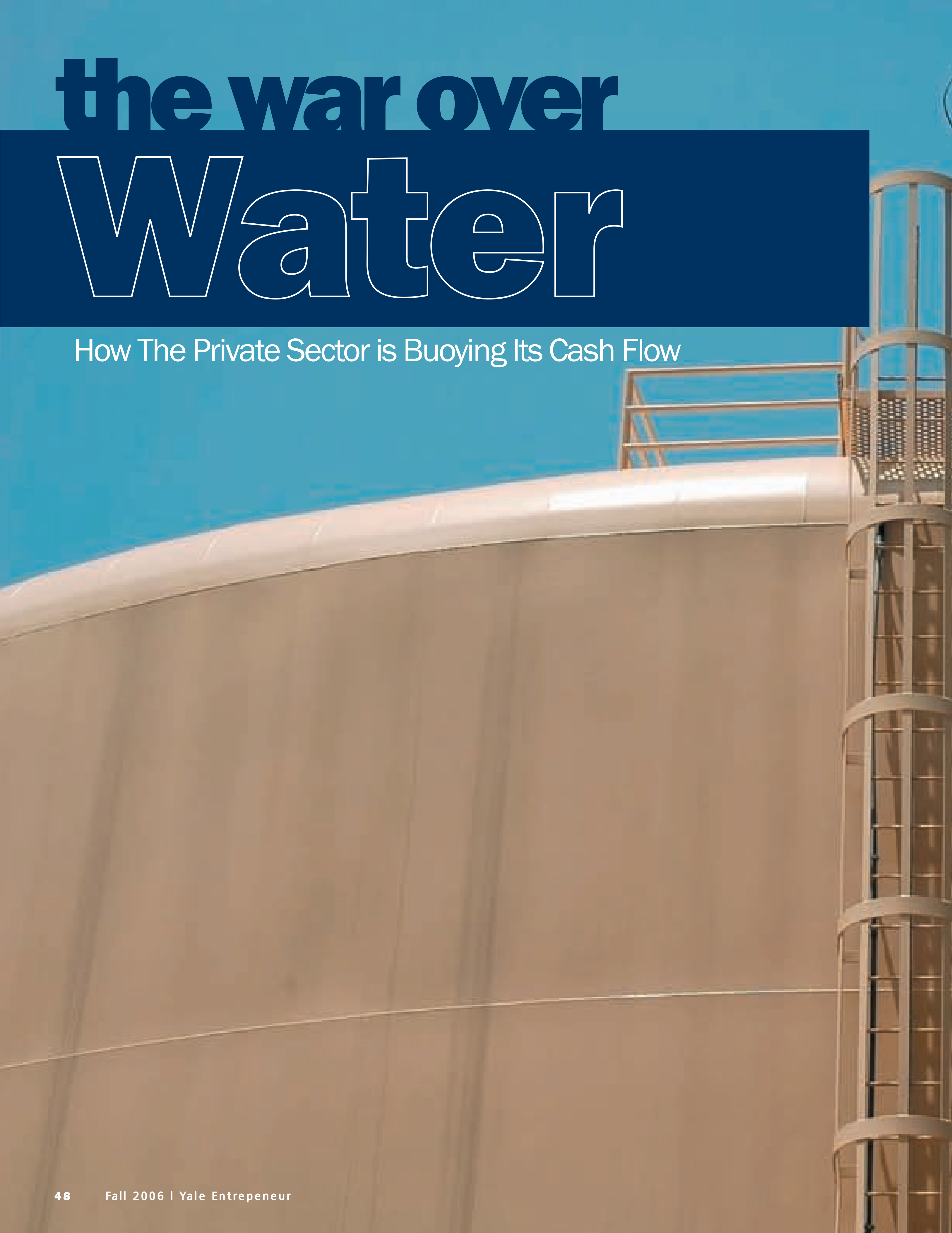
The technique of randomized trials can also be used to improve the evaluation of aid and lending programs. Typically, in the past, aid effectiveness has been judged by the goods and services delivered to schools and clinics or by the fulfillment of prescribed procedures, and not so much on the basis of its impact on the education and health of poor families. Non-governmental organizations (NGOs) in developing countries can conduct such evaluations with guidance from academics and outside financing.

Clearly there is much to be gained by combining top-down and bottom-up approaches to development. It is hard to argue that the identification of MDGs was not a worthwhile endeavor insofar as it has served to focus attention on the plight of the world's poor and helped to mobilize official aid for poor countries to achieve them. At the same time, however, the vision embodied in the MDGs is more likely to be fulfilled if efforts are made, in the implementation of country-based plans, to identify development entrepreneurs at the local level who can devise practical and effective ways of improving the welfare of poor communities consistent with those goals. In addition, aid effectiveness can be enhanced if more time is devoted to well-designed impact evaluations that make use of randomized trials, along with other evaluative techniques, to monitor carefully the results of aid programs at the local level.

Anthony Elson is a Washington-based economic consultant and is teaching a Yale College seminar on the IMF, World Bank and Globalization. He is a former senior staff member of the IMF and senior consultant with the World Bank.

the war over Water

How The Private Sector is Buoying Its Cash Flow



By Nilesh Vashee

Water, a basic three-atom molecule covers nearly two-thirds of the planet and is a necessary ingredient to all forms of life. These are facts that any high school student can recite. Yet in recent years, water has become a topic of considerable debate and heated conflict. The question remains: what has transformed this simple, seemingly ubiquitous liquid into a turbulent issue across the world?

The crux of the conflict over water can be distilled to simply ownership and allocation—who technically owns this natural resource, and how it should be distributed? When privatization comes into the equation, it affects such intermediate factors as water's management, distribution, and production. If privatization involves a seemingly innocuous reassignment of water utilities from the public to private sector, how could it be responsible for causing future wars? The answer is simple: money. Although water as a public utility was previously deemed to be low-return, its private management has the potential to be quite lucrative. This opportunity for economic gain has many implications and could completely alter how we relate to our natural resources. In fact, water could very well be the "oil" of the twenty-first century, as many claim that it will be the root of both domestic and international wars.

Water has no substitute and thus no alternative—consumers of private water corporations become captive clients, which may open the door for exploitation by firms.

WATER'S TURBULENT PAST

The privatization of water is a fairly new concept, with the first instances occurring less than fifteen years ago. In the decade from 1993 to 2003, three major global corporations seized control of the water supply of 300 million people in 100 countries, according to the Global Policy Forum (GPF). *Fortune* reported that while only about 5 percent of the world's water was in private hands at the end of that decade, the annual profit of the water industry as a whole was comparable to roughly 40 percent of that of oil. This astounding figure highlights why many private companies are scrambling to invest in this lucrative industry. For example, in 1999 alone, American private corporations acquired more than $15 billion worth of water utilities. Recent years have seen a continuation of this cascading privatization effect. In the latest figures released in 2004, the GPF said that if the current growth rates continue, "the top three [major corporate players] alone will control over 70 percent of the water systems in Europe and North America in a decade." To complement the rapid physical acquisition of water utilities, private water corporations often increase their participation in government systems worldwide in order to secure their legitimacy. In the U.S., for example, companies push for legislation which would give federal money to developing countries in exchange for those countries exploring the possibility of privatizing their water sources. According to a study published by the State Environmental Resource Center, "From 1995 to 1998, the water utility industry, its employees, and their political action committees, spent less than $500,000 on campaign contributions. But from 1999 to 2002, campaign spending more than tripled to roughly $1.5 million." The acquisition and lobbying blitz has brought the debate about the privatization of water out of the corporate world and into the public domain. As it stands now, the debate over whether water privatization is a success or failure is framed through two lenses: empirical evidence and economic implications.

THE POSITIVES OF PRIVATIZATION

One of the strongest arguments in support of the privatization of water is that water is a renewable resource. While a large percentage of the Earth's fresh water is frozen and unusable, the water that can be used comes from many natural sources and replenishes itself often. This is the precise case made by Gerry White, a Canadian water entrepreneur. In an interview with the Canadian Broadcasting Company, White revealed plans to purchase property rights to the water of a lake in Newfoundland and then sell this water overseas. White plans on skimming 500,000 cubic meters each week to sell in bulk. He claims the lake, which is 10 by 16 kilometers, would immediately be lowered by one inch, but would naturally replenish itself within just 10 hours.

Moreover, advocates of water privatization also cite economic benefits to support their stance. The most powerful economic advantage, which also plays to the favor of local governments, is that privatization creates jobs. In White's case, many new workers will be needed for tasks such as loading tankers and building purification factories and pipelines. Entirely new employment opportunities such as these are extremely appealing to governments, especially in places like job-poor Newfoundland. Another economic benefit of water privatization suggests that privatizing ownership and management of water utilities reduces costs incurred by the government and thus by the citizens. Since governments no longer spend a portion of the budget on the public utility, the citizens in turn experience fewer costs. In addition to lower customer cost, private water companies often cite higher rates of customer satisfaction when advocating the privatization of water. They claim that a satisfied customer is, in itself, evidence that water from a private source is both of high quality and affordable. The companies believe that as long as the consumer is happy, the debate is resolved.

WATER, WATER EVERYWHERE?

Despite the potential benefits of water privatization, there are many who argue the opposite site of the debate using both efficiency and ethical rationales. While private corporations often refer to customer satisfaction statistics to support their businesses, researchers on the other side of the issue point out evidence to the contrary. For example, a study published by the State Environmental Resource Center tracked the water prices in Pekin, Illinois over an 18 year period. Under the ownership of the private company Illinois-American during those 18 years, the water rates increased by 204 percent. This heavy increase in price produced a consumer response markedly opposed to the picture painted by private corporations, implying that consumers are not always satisfied or better off under privatization. Citizens in parts of Australia, Canada, Morocco, Argentina, Britain, New Zealand and South Africa also experienced negative effects from water privatization. According to a study published by socialjustice.org, citizens in these countries not only faced higher water prices but also deteriorating water quality when water sources were privatized. In 1998, shortly after water was privatized in Sydney, Australia, not only did prices increase but it also became contaminated with *giardia*, an intestinal parasite. Similarly, Johannesburg, South Africa saw water become increasingly unaffordable and inaccessible. In fact, thousands of people lost access to the water supply and cholera infections were widespread. One explanation for the deteriorating quality leads to yet another point against water privatization—private corporations are strictly bottom line profit-maximizers. In other words, the lure of profit may provide private corporations with incentives to cut corners in regards to water quality. Furthermore, a company's private interests bring into question the tradeoff between short-term profit maximization and long-term needs to protect infrastructure and natural resources. In other words, a corporation's quest for profit may run water sources dry. According to a United Nations study, the water supply is not infinite, even though water is renewable. If proper care is not taken, there is a certain point where water bankruptcy will occur. Again, this evidence attests to the claim that consumers might not always be better off under privatization. The study says that by 2025, two-thirds of the world will be "water-poor," a term loosely defined as people who are in need of more water than they are able to procure. The idea of the majority of the world being "water-poor" brings up a series of moral oppositions to water privatization. David Boys, a worker for a federation of public trade unions, summarizes the main argument: "You can switch from Coke to Pepsi but you can't switch from water to…what?" Water has no substitute and thus no alternative—consumers of private water corporations become captive clients, which may open the door for exploitation by firms. Therefore, when companies try to make large profits through high prices, it denies the poor access to what many call the most necessary substance of life. Humanitarians argue that water is a natural, inalienable right and all should be provided access to it at the lowest possible cost. Thus, according to humanitarian efforts, the corporate quest for profit not only decreases consumer benefits but also violates the natural rights of humans.

THE COMING CONFLICT

The privatization of water is becoming an increasingly pertinent issue on a global scale. For example, the World Bank and the International Monetary Fund have made all loans to developing countries conditional on the privatization of water sources. One such loan, given to Bolivia in 2000, turned the managing of water utilities to the water conglomerate Bechtel. Within weeks, prices rose by as much as 200%, spurring widespread chaos and considerable civil unrest. Transportation froze as disaffected citizens went on strike. The Bolivians took to the streets to protest the rule of foreign investors over their water systems and they were barraged with tear gas by policemen. Bolivia's President Hugo Banzer finally diffused the situation when he broke the $200 million contract with Bechtel, restoring his immobilized and chaotic country to its original state. Although the privatization of water has large implications for developing countries, it is also hitting close to home in the United States. According to the Reason Public Policy Institute, water privatization is constantly expanding within the U.S. borders. Two out of five drinking water systems in the U.S. are both privately owned and regulated. One out of six Americans drinks from one of these privately-owned water systems. Oil, the "black gold" has cost our country dearly in terms of both national debt and national solidarity. But these wars were waged overseas, removed from the confines of our nation. In contrast, water is present within our borders and inextricably intertwined in the life of every single American. Is our nation prepared to face the uncharted future "blue gold" will bring, or will the simplest and most essential substance of life tear us even further apart?

golden Prospects

An Interview with Douglas Jackson

By Brad Hargreaves

Since 1937, not a single nation in the world has relied on gold as a medium for trade. As fiat money became the norm for commerce, the gold standard found a comfortable place in the history books of the modern world. Dr. Douglas Jackson, Chairman and founder of e-gold, inc., however, has plans for change. Jackson's revolutionary venture, e-gold, is an electronic payment system through which currency, issued in units of weight, is fully backed by reserves of gold.

Jackson's initial foray into entrepreneurship was rooted in his interest in medicine. After receiving his M.D. from Penn State in 1982 and finishing his residency in 1986, Jackson went on to serve as a Major in the U.S. Army Medical Corps. In 1992, Jackson became a founding partner in his first venture, Florida Oncology, which provided hospital-based oncology services.

After devoting much of his personal time to studying the monetary influences of credit as well as the business cycle, Jackson first developed e-gold in 1995. One year later, e-gold was launched, and it met astonishing success. e-gold saw a growth from just 3,000 accounts in 1999 to 130,000 by 2000. That same year, the company hit its millionth transaction. e-gold's remarkable success caught the attention of the financial world, and numerous other competitors such as GoldGrams and e-bullion were quick to enter the market. Currently, e-gold boasts just over 3.6 million user accounts. With a marketing budget close to zero, this makes an impressive feat for any seasoned entrepreneur.

Because of Jackson's innovation, payment through electronic, gold-backed currency has become a phenomenon in its own right. *Yale Entrepreneur* had the opportunity to sit down with Jackson and ask him his thoughts on the progress and future of his groundbreaking venture.

Yale Entrepreneur: What prompted you to found e-gold and how did you develop the business idea?

Douglas Jackson: My initial goal was to offer the world a method of payment that would be based on rules and would therefore be immune to manipulation. The choice to define this method then in terms of units of weight, backed by a 100% reserve of physical gold, was a no-brainer. An asset portfolio containing securities in any form would have introduced financial risk. Only a 100% reserve of a physical commodity could avoid both credit risk and market risk.

YE: How have you seen e-gold and similar methods of payment affect the nature of currency exchange and global trade and finance?

DJ: e-gold is in a class by itself. There are imitators but they are all oriented towards gold as if it were an end in itself. We are about payment efficiencies, fixing what is broken, and providing what has always been lacking.

Two innovations, among many others, that are made possible by e-gold warrant mention: global banking and a global clearing-house.

No existing currency is designed to serve global needs. They are all, without exception, instruments of policy and power of their domestic polity. For example, dollar bank accounts outside of the U.S. require the non-U.S. bank to work through an onshore correspondent, adding a layer of delay, cost, and even some degree of financial risk. Using e-gold, a financial institution anywhere in the world could accept deposits from anywhere in the world, even if the depositor is of modest means or has never banked in the past. The inbound e-gold payment cannot fail or be reversed. The outbound payment (a withdrawal, or perhaps a loan advance) goes directly to the depositor without any need for a financial intermediary.

Imagine marrying this capability to a sound and well managed bank in a country such as India where: a) remittances from expatriates comprise a significant chunk of their balance of payments, and b) there are domestic hordes of gold that currently generate negligible GDP. Connect the dots and you can envision how India could swing from reliance on foreign direct investment to becoming a net exporter of capital.

YE: Was it economic freedom that prompted you to institute a policy where transactions are irreversible and background checks aren't performed? Is there any risk associated with this?

DJ: Every payment system except e-gold is riddled with credit risk. Users can default and leave someone holding the bag. There is therefore a business necessity for all other systems to (try to) know the heck out of their users because of the conditionality of transfers due to credit risk. Receiving payment with plastic is like a loan and the merchant can be and often is required to cough it back up. e-gold, and anyone that accepts e-gold, in contrast, has no exposure whatsoever to the creditworthiness of users. You get paid, you stay paid. e-gold implements a real-time gross settlement protocol, further strengthened by a strict debit rule. Because of this, accounts are free and created instantly.

It is a gross misunderstanding, however, to buy into the nonsense myth that e-gold is anonymous. Even if we wanted it to be, it is impossible for a system that performs transfers by book entry settlement to achieve anonymity. In fact, two elements make e-gold more traceable than any other payment system.

First, you can only receive e-gold as a transfer from someone who already has some. Likewise, it is impossible for a user to send value into the system. e-gold has no bank accounts and no way to accept a conventional money payment. It is a closed universe.

Second, there is a permanent record of all transfers, such that the entire history of every unit of value in circulation is traceable. The moment an account receives a payment, or makes one, there is a permanent, discoverable connection with the counter-account, and their counterparties ad infinitum.

We've worked with law enforcement from time to time tracking down world-class criminals, all of whom had numerous bank accounts—using stolen identities, who made the career-ending mistake of believing this garbage about e-gold being anonymous and untraceable.

YE: Where do you see the greatest opportunity for entrepreneurship and innovation in the internet today, and does this involve e-gold?

DJ: Recognizing that to a hammer everything looks like a nail, I nevertheless am convinced that taking advantage of e-gold and developing a business that will grow with its emergence is the greatest opportunity. For example, throughout East and South Asia, Africa, South America and Eastern Europe there will be a bewildering explosion of newly empowered consumers (and, for that matter, investors), heretofore excluded from the upside of globalism. e-gold connects these individuals as buyers and sellers to global markets. You will note the gaping e-gold shaped opportunity of providing hard "currency" and access to an efficient payment system to this previously excluded majority.

YE: How much progress has the electronic bullion movement had since e-gold's founding? Do you believe that e-gold and similar methods of payment could grow to eventually replace traditional currency, or at least compete with it?

DJ: I am not entirely comfortable referring to e-gold as a movement. That sort of language implies a political agenda, which e-gold does not have. e-gold is a commercial service, specifically designed to serve as the base money of an alternative global currency. We see e-gold not as replacing, but as complementary to standard currency.

There are also a multitude of untapped opportunities for gold-denominated consumer debt—for example an honest-to-God "gold card" that rather than being mere metaphor incurs e-gold debt every time the consumer flashes his plastic. If Visa or Master Card are asleep at the switch or too afraid of their shadows, this would be an opportunity for an emergent Chinese card-association to eventually eat their lunch.

Imagine a third-world online auction service that vaults past the obstacles eBay is facing trying to penetrate markets where hardly anyone has plastic.

As things stand however, gold remains hopelessly screwed up because for all intents and purposes it is a sterile asset. There are no gold bonds worth mentioning. You need a gold income before it is suitable to take on gold debt. The emergence of e-gold will change all that.

private prisons public problems

By *YE* Staff

The verdict is in: America's prisons are facing serious trouble. The statistics don't lie—not only are today's incarceration rates rising rapidly, but they have been paced by burgeoning operating costs. According to the Bureau of Justice Statistics, American prisons housed almost 2.2 million inmates in 2005, representing a 2.6 percent increase from the previous year. To support this growth, the amount of tax dollars needed for prison maintenance and operation is rapidly growing.

A simple side-by-side comparison proves that this negative trend seems to be unique to the U.S. The United States currently boasts an incarceration rate of 738 per 100,000 residents—the highest in the world. As a basis for comparison, Canada has a rate of 107 per 100,000 residents, while the incarceration rate in France is a mere 88 per 100,000.

In the face of these trends, is there anything being done to counteract this sentence of developed-world disparity? It seems that recently the government has been turning, albeit with questionable results, to privatization as a potential solution to the rapid and escalating decline of our domestic prison system.

THE PERMEATION OF PRIVATIZATION

In recent years, a trend in prison reform has been privatization—transferring the management of a correctional facility from the state to a private entity. This experimental pairing has been gaining momentum across states. The increased popularity leaves us with a key question: is it *ethical* to apply privatization as an antidote to the woes of our current prison system?

EVALUATING THE INCENTIVES

The incentive system of the incarceration market provides some insight into the ethics underlying the current prison system. The introduction of a business model into such a market requires us to look at the interplay between corporate profit-maximizing strategy and our ethical rationales for incarceration. It seems that in many cases, this marriage of public and private sector operations could lead to a system with inherently warped incentives.

Consider the dynamics of any market governed by basic economics: if the market for private prisons becomes extremely lucrative, it could prompt new companies to enter the market in order to share in the growing profits. Prisons cannot feasibly operate without a steady influx of prisoners to fill their cells; thus it seems that there exists a business motivation to keep a steady stream of convicts moving from the courtroom. In addition, there may be a considerable motivation to keep recidivism rates high, in order to avoid eroding the current end user market of the prison services.

If their business is based upon the retention of and acquisition of new prisoners, what incentive is there to reform and help prisoners? Prisons may not have as much motivation to provide their prisoners with the necessary counseling or self-improvement services to help them assimilate back into society after their respective sentences have expired.

A NONPROFIT SOLUTION?

If we accept that a traditional business model has the potential to introduce warped incentives into the market for incarceration, the nonprofit prison framework may serve as a viable alternative. An article published in *The Boston Globe* in February 2006 finds that, "after controlling for personal, institutional, and community characteristics that might affect releasees' propensity to reoffend…nonprofit management led to recidivism rates 1 percent to 2 percent lower than public management, and 6 percent to 8 percent lower than for-profit management."

Why have these nonprofit ventures proven successful in a sphere where the private sector has affected little improvement? Perhaps it is because they are able to combine the efficiency of the private sector with the focus of the public sector. Or it could be that these ventures have the leeway to experiment with new products and services since they are not governed by the strict principles of profit maximization. Whatever the rationale, it seems that nonprofits may be a promising solution to the problems of our prison system that are not addressed, and even are exacerbated, by the invasion of privatization.

PLENTY OF PRISONERS

Every year, taxpayers foot the bill for the $32 billion cost of maintaining federal and local prison systems. Keeping an inmate in prison for just one year costs on average $22,000, with a life time sentence amounting to $1.5 million on average. While some argue that this figure economically justifies sentencing such inmates to death, the state of New York recently reported that the average cost, both legal and penitentiary, of state cases involving the death penalty amounted to $23 million per person.

According to the United States Department of Justice, almost 1,000 people are incarcerated every week in the United States. The number of people in jails has risen by 600% since the 1970s to reach 2 million inmates today.

Six out of every ten inmates are Black, Latino, or Asian. Men are almost ten times more likely to be incarcerated than women. A recent study done by the Justice Department determined that a correctional officer is the fourth most violent job behind policemen, taxi drivers, and private security guards.

-Christine Geiser

Wal-Mart Goes Organic

By Alexandra Wilde

The last few years could have gone better for Wal-Mart. With sluggish growth, stiff competition from Target and Costco, and accusations of pollution and labor practices, the discount giant was under a lot of pressure to rev up its economic game. Still, few could have anticipated the May 12 *New York Times* headline: "Wal-Mart Eyes Organic Foods."

From carrying lettuce in the winter to making Kellogg's a household name, big business has always been an agent of change in the American diet. What compels these corporations is the American desire to choose what types of food they consume and when. By carrying affordable organic foods, Wal-Mart seeks to give Americans even more choice in how—and what—they eat.

Yet at what cost? If Wal-Mart successfully breaks onto the organic scene, the costs to farmers, small-business owners, and even consumers could be astronomical.

In 1990, Congress passed the Organic Foods Production Act with the purpose of establishing a national standard for the definition of organic products. Since then, the organic foods market has grown exponentially, fueled mainly by upper- and middle-class consumers. This rise caught the attention of Wal-Mart, which hopes to capitalize on the ever-growing organic market. Internationally famed for its rock-bottom prices, Wal-Mart is expected to drive down prices and increase the availability of this theoretically healthier food to people of all income levels upon entering the market. Moreover, by carrying well-known organic brands, Wal-Mart hopes to draw wealthier customers who will use Wal-Mart as their one-stop shopping center. Essentially, this new move offers a two-way street—Wal-Mart will introduce organic food to new demographics, and organic food will introduce Wal-Mart to new customers.

The new organic food options will be offered at Wal-Mart's renowned lower prices—only about 10% more than their conventional counterparts. Compare this price guarantee to Whole Foods, which can charge up to twice that amount for an organic product. Although Wal-Mart will now bring cheap organic foods to the masses, smaller farmers may feel the strain of lower prices for their produce. In a *New York Times* article, Ronnie Cummins, head of the Organic Consumers Association, commented that Wal-Mart did not care about the principles behind organic agriculture and he feared that the company's entrance would ultimately drive down prices and "squeeze organic farmers."

Concerns regarding Wal-Mart's entrance to the organic market are not limited merely to its consequences for farmers—many are concerned about its effect on the image of the organic industry as a whole.

Concerns regarding Wal-Mart's entrance to the organic market are not limited merely to its consequences for farmers—many are concerned about its effect on the image of the organic industry as a whole. Prior to the entrance of Wal-Mart, the organic foods market centered around the idea of family-run stores, where service became personal and the quality of the foods was trustworthy.

Whole Foods, a chain of grocery stores that sells many organic products, creates the semblance of a farmers' market in its stores with all the appropriate trappings, ranging from wicker baskets to free samples. Many of the organic products sold use this familial advertising as well. For example, Annie's, which offers products ranging from organic macaroni & cheese to "Cheddar Bunnies," carries kid-friendly links on their website about the importance of organic foods and general nutrition. Annie's also has a Cases for Causes program in which it donates its products to nonprofit organizations. This theme of philanthropy is not unique to Annie's. Another family-run organic brand, Newman's Own, holds an impressive record of donating all its profits—over $200 million—to charities. Numerous other organic brands have followed suit.

Because this culture of charity is common in these brands, organic food has become synonymous with philanthropic, community-focused, and eco-friendly ideals. Essentially, consumers of organic food are buying into an advertising technique rooted in the principle that organic companies represent more than just profit-makers; their image has evolved to represent companies that are aware of community needs and in particular environmental concerns. One of the biggest draws of organic foods is that

organic production methods are more eco-friendly than standard farming techniques. Additionally, a larger percentage of organic food is sold locally, thereby minimizing emissions in transportation. However, when applied to Wal-Mart, this is no longer necessarily true. Even if growing food organically is better for the environment, shipping this food across the country still requires a substantial use of fossil fuels, thereby increasing emissions. In the article "Beyond the Pale Green" published by grist.com, Michelle Nijhuis notes that the average pound of produce in the US has traveled between 1,500 to 2,500 miles to get to the table. "Organic or not, oranges burn a lot of fuel on their way to Minneapolis." Because of Wal-Mart's extensive reach across the nation, its business model could very well necessitate transportation of produce over long distances. Consequently, the label of "organic" on Wal-Mart's product offerings does not ensure that the products are entirely eco-friendly.

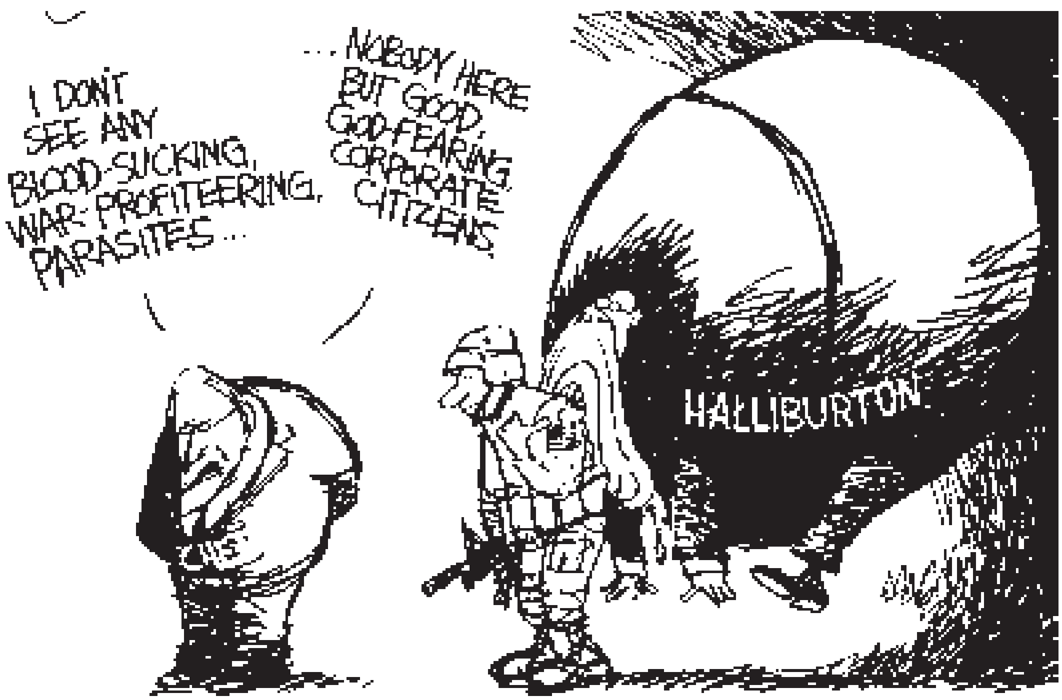
On the other hand, today's organic farmers usually have smaller farms and sell to local markets. According to a report by the United States Department of Agriculture, more than four-fifths of sellers at farmer's markets are organic farmers. The use of direct selling means a good percentage of organic produce need not travel 1,685 miles and gobble up the gallons along the way.

Much to the chagrin of Cummins and other organic enthusiasts, Wal-Mart may bring about the end of these small- and medium-size organic producers, which would ultimately mean the end of the environmental benefits of local production. As Cummins told *The New York Times*, "[Wal-Mart's] business model is going to wreck organic the way it's wrecking retail stores, driving out all competitors." Moreover, even though Wal-Mart does not currently import any of its organic products, it cannot promise that it will remain so in the future. What will stop Wal-Mart from importing organic products from places like China, where the USDA does not have any oversight and where labor is cheap?

Looking at Wal-Mart's current history with organic food, the future doesn't look bright. Wal-Mart has repeatedly aligned itself with brands that do not support "organic ideals." For example, even though Wal-Mart has been the largest seller of organic milk, its milk mainly comes from two companies—Dean/Horizon and Aurora. In a study done by the Cornucopia Institute, an organic farm watchdog organization, most of the cows employed by Dean/Horizon and Aurora come from factory farms, and the two companies are currently under investigation for complaints that cows do not have access to pasture. Both of these allegations conflict sharply with organic standards.

Wal-Mart's entrance into the organic food market will not only change the eating habits of Americans, but also the face of organic food itself. The real question is: will Americans still view organic food in the same light that they have before? As the Cornucopia Institute stated, "If corporations recklessly concentrate just on the bottom line, at the expense of organic integrity, all players in the industry, regardless of scale, will likely lose." By selling organic products, Wal-Mart is not just playing with its image—it is potentially altering the image of organic products themselves.

The Last Word



By Joe Citarrella

Halliburton Takes Department of Defense Private, Cheney has 27th Heart Attack.

HOUSTON, TX – After years of fending off allegations of fraud and profiteering in connection with the war in Iraq, oil & gas giant Halliburton Energy Services has announced that it will purchase the United States' Department of Defense. Under the terms of the deal, Halliburton will pay up to $3 million in cash and stock in exchange for all of the Department's assets and a November 2008 option on Vice President Dick Cheney's soul.

"We are very excited about the synergies this deal can create," remarked Halliburton CEO David Lesar. "We anticipate much greater efficiencies in our 'overcharging for expired food rations' program, which has been a real blessing for our shareholders. Not so much for the armed forces, I guess. But whatever, we practically owned them before and now we actually own them."

Pundits expect that Halliburton will save up to $30 million dollars a year in what Lesar calls "silly b****" charges, such as legal expenses from the many lawsuits brought against the company. It also adds a nice trophy to Halliburton's balance sheet, which already includes massive oil reserves and the entire country of Azerbaijan.

Not surprisingly, the deal—the first of its kind—has been met with great criticism.

Some have expressed concern about the terms of the deal. "$3 million?! You can buy a friggin' Cabinet department for $3 million?!" said one critic. "And wait a second, Dick Cheney doesn't have a soul."

Others worried about the legality of the deal. "They can't just buy a Cabinet department. It's totally unconstitutional," said one concerned citizen, who preferred not to be mentioned.

Democratic Senator Patrick Leahy, a long-time Dick Cheney "player-hater," agrees.

"Figures. But I knew it was only a matter of time before [Vice President] Dick [Cheney] made this happen. Not even the atherosclerosis in that little black heart of his was going to prevent it," muttered Leahy.

Yet Cheney, who told Leahy to go f*** himself for the second time since 2004, assured reporters that he was not involved in the deal. When pressed further about his ties to Halliburton and the likelihood of his involvement in light of the evidence stacked against him, Cheney stood his ground.

"I never have and never will be involved in these organizations," he said.

But when one reporter pointed out the fact that Mr. Cheney spent the 1990s serving first as Secretary of Defense, and then as Chairman and CEO of Halliburton, Cheney suffered a heart attack and was rushed to a hospital before he could respond.

"Don't worry, he'll be okay. Been there, done that," said a Cheney spokesperson, referring to Mr. Cheney's history of heart troubles. Doctors say the dark black crust around Mr. Cheney's heart means he can sustain multiple heart attacks without dying.

Halliburton shares closed at $31.14.